THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—34TH YEAR. SYDNEY, SATURDAY, AUGUST 16, 1947. No. 7.

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An Address.[1]

By L. R. MALLEN,

Retiring President of the South Australian Branch of the British Medical Association.

THIS past year may well be counted as the first post-war year, a year in which most war-time activities have ceased. The armed forces have been practically demobilized and the service man or woman is once more back to peace-time occupations.

We as a profession are more intimately concerned with the demobilized service medical man. The majority were older men who had graduated before the war, most of whom had their own practices to which to return. The younger graduates, especially those who finished their university course during the war and who went straight into the services, had no or very little experience of private practice and so had to start out in what was for them a new life. They attended rehabilitation courses which undoubtedly benefited them, but they still had to find work to do—they all wanted to make a living. We were somewhat concerned twelve months ago as to how they would settle down and how they would work in with the other members of the profession. I am very pleased to say that most of our fears were groundless. They have fitted into the scheme of things very well and there have not been the upsets and the differences of opinion we somehow anticipated.

Last year you were asked (especially the older members who had carried on so magnificently during the war years) to help these younger men as much as you could. The most practical way was to offer them assistantships or partnerships, but if you could not do this, to give sound friendly advice and not to act as a stumbling block to them.

The reason why we had so little dissension is due to the fact that you did help them to become established—that partnerships and assistantships were found for many. A number have yet to finish their rehabilitation courses and I appeal to every one of you to still help all you can. There are very unsettled years, so far as our profession is concerned, before us, so that a little sound, friendly advice and help are going to bind the members of our profession closer together and to leave fewer disillusioned men, discontented with their lot, who will enter into any haphazard scheme that may be put before them.

You may not want to take a partner or an assistant, but if you have too much to do, or if your district is obviously expanding with the population increasing and another doctor, after calling on you, settles in, it is not too much to ask you to try to cooperate with him.

Some who are still doing their rehabilitation course, and others as well, have taken the opportunity to sit for examinations to obtain higher degrees, in other words, to specialize. May I make some comment here? During the war years specialist training practically came to a standstill and so we now have some leeway to make up. However, all over the world there is a tendency in our profession to over-specialization. What are the reasons for this? I know that it is not possible for any one man to master the whole science and art of medicine and surgery. With the increase of scientific knowledge medicine has become such a huge subject that, if we are to progress still further, some must concentrate on and study one particular branch only—they must become specialists. It is a very laudable object in life to make oneself a master at his work, but is this the only reason why so many want to specialize now? I think there are other factors which influence them.

Some think of the financial gain, for there is more chance of an increased competence—the fees are larger—in specialization than in general practice.

Others may be influenced by the question of work and prestige. It is well known that more and more work is being handed over to the specialist by hospital boards,

[1] Read at the annual meeting of the South Australian Branch of the British Medical Association on June 25, 1947.

insurance companies *et cetera*, and that less and less is being left to be done by the general practitioner. The prestige of the specialist in the community, his social position, is rising while that of the general practitioner is decreasing.

There is also the thought with many that the hours of work will not be so long or so arduous, especially so far as night work is concerned. The specialist's work tends to be concentrated in hospitals or in his own consulting rooms, and the long, tedious journeys around the district are not so necessary.

But probably the most important factor influencing one is the constant threat that we have of a national medical service. The thought arises that if one has higher qualifications then there is a much bigger chance of bettering oneself in such a service—of getting work in the more congenial surroundings of the cities or at least the bigger centres and so of not being forced to go out into the country districts, especially in some outback, isolated area.

Whatever may be the reason for specializing, it is well to remember that most of the ills that beset the human race can be competently treated by the average general practitioner. Also that our country is a land of big distances, sparsely populated in the main, but which must nevertheless be adequately supplied with medical practitioners who, because of the fact that distance isolates one from the other, need to be capable of treating all ills—to be general practitioners.

The last factor—that of going out into the country to practice—has obviously been influencing many for a considerable time. In this State, as in, unfortunately, the other States of the Commonwealth, a large proportion of the population is concentrated in the capital city. Just a little over one-half of the people of this State reside in Adelaide and its suburbs. Now here is an anomaly, only a little more than one-fifth of the medical practitioners registered here practise in the country, and I think that I am correct when I say there is not one specialist among them. Surely this must give rise to some deep thinking.

It is common knowledge (and this was more than realized and made evident during the last war) that it is wrong to concentrate the majority of the population in one small area. Even governments, though admitting this, seem loath to try to alter it and to think that almost anything is good enough for the country.

May I illustrate this by the following? Just recently a member of our profession was giving evidence before a government committee appointed to inquire into a new hospital which it is intended to build in the city. He impressed on this committee the great need of a modern, properly equipped maternity section, separate from the rest of the hospital, where the students could be trained in the latest methods by the use of the most modern and best of equipment. He stated that the present maternity hospital, where the student are now trained, far from met these ideals. He was asked whether he did not think it better to train the students, as at present, in a place which was not well equipped, so that they would be used to working in such conditions when they went out into the country to practise.

As one who has worked for many years in the country, I certainly do not agree with any such suggestion. The person living in the country is just as entitled to proper medical care and treatment as is the person living in the city.

How are we going to alter all this or can it be altered? It is obvious to you all that some form of national medical service is certain to be put before us in the near future. Whatever form it does take, we must see that these anomalies about which I have just spoken are remedied where possible. I am going to make some suggestions, and these suggestions are purely my own personal ideas with which you may or may not agree.

Concerning the more distant, very sparsely populated areas, such as exist in the far north of this State, the only solution appears to be the greater use of a Flying Doctor Service. The service that now exists is doing truly wonderful work, but its scope should be extended to cover all such parts of our State.

In places where the population is greater, but where there are still not enough people in one area to induce a doctor to set up practice, some form of guarantee is necessary. The patients pay ordinary fees and the Government (not the people) make up the guarantee if it is necessary. It may even be better in some areas to give a straight-out salary, but the guarantee appeals to me more than a salaried service. In these districts a small cottage-type hospital should be built and sufficiently well equipped to deal with all midwifery and the ordinary medical and surgical cases that may occur. An operating theatre should be provided, equipped to allow most operations to be performed. Even if the doctor living there is not capable of performing certain operations, then a team of specialists could visit the place to perform any such operation which may be necessary.

The more thickly populated parts are at present reasonably well served by Government or Government-subsidized hospitals. There are seven Government and thirty-eight Government-subsidized hospitals functioning in various parts of the State, and in most cases they are reasonably well equipped. These hospitals, all of which are either part-time or full-time training schools, should all, however, be fully equipped and able to handle practically every type of case which may be sent in to them. By that I do not mean that they should be turned into some gleaming, ultra-modern affair with all manner of gadgets, most of them unnecessary, and so become an architect's dream, but should have the accommodation and equipment which are now deemed necessary for the efficient treatment and nursing of all patients.

There should be established in various centres pathological laboratories and radiological clinics which will serve a specified area. The services of these laboratories and clinics should be made available to all practitioners living in the area served by them. It is absurd to send a person often 400 to 500 miles for radiological or pathological examination as is necessary at present.

Teams of specialists—medical, surgical, gynæcological, obstetrical, and ear, nose and throat—should be stationed at selected base hospitals in various parts of the country and their services should be available to all living in that area. Where possible they should see and, if necessary, operate on the patient in his own district hospital and not expect the patient or patients to be brought to them at the base. For certain rarer conditions or in the case of big operations requiring special equipment and treatment the patient may go to the base hospital selected.

All parts of the country should have an ambulance service. This is one thing which is sadly lacking at present, but under conditions such as now exist it is, in most cases, too great a financial burden for the district concerned to buy and operate one. Each hospital should have an ambulance which should be made available to all persons living in the district served by that hospital.

That is just a brief summary of the main points for a medical service as it will affect the country areas. These of course will need to be enlarged upon and elaborated to meet the needs of all when we know what form the medical service will take.

I have said that some form of a national medical service is certain to be placed before the public in the very near future. You will remember that at the last elections a referendum was agreed to by the public which gave the Government control of all social services and in this was included that of health. *The Pharmaceutical Benefits Act* has already been passed by Parliament. Under this act certain drugs, sera *et cetera*, which are to be named in the formulary to be prepared by a subcommittee appointed by the Minister of Health, are to be supplied to the public free of charge.

You will be asked to write your prescriptions for these medicines in triplicate on special forms to be supplied to you, and your prescription must be one from the list of free drugs. You prescribe to a formulary and not according to the patient's actual needs. This act will encourage the taking of more and more medicines, as has been amply borne out by the experiences in New Zealand. Over there the cost per year for pharmaceutical benefits has risen by leaps and bounds with each year that it has been in force.

It was Osler who said that the desire to take medicine was perhaps the greatest feature which distinguished man from the animals. It might be that those who framed this act would like to make this distinction still greater. It has been suggested by the Federal Council that only those life-saving, relatively costly drugs such as penicillin, the sulphonamides, the various sera and vaccines, parenteral injections (liver extracts, insulin, "Mersalyl" *et cetera*) be supplied free. I am certain that this is a sound suggestion and would meet with the approval of most.

If so much money is available surely there are many things more important and necessary than the supplying of a free bottle of medicine. Nowhere nearly enough is spent on medical research, and we must keep on pressing the absolute necessity for providing adequate funds so that research can be continually maintained. Every year we see the cream of our research men leaving this country to go overseas. We do not lack the men for research, we lack the means.

Housing, properly equipped hospitals in sufficient numbers, adequate public health services, treatment and control of tuberculosis are but a few of the many things which should receive attention, and funds should be made available for their completion before free bottles of medicine are given away.

Let us consider briefly the *National Services Act* which was passed by the British Government and became the law of the land early last November. I do this because I feel certain that our Government here will use this act as a pattern in framing an act for a national medical service in this country. This act placed a general duty upon the Minister of Health to promote the establishment of a free, comprehensive health service designed to secure improvement in the physical and mental health of the people and the prevention, diagnosis and treatment of illness. The act itself dealt only with the main structure of such a service. Its detailed administration will be governed by regulations to be made by the Minister.

There will be established a central council and standing advisory committees. The central council is to consist of 41 members, of whom 21 will be medical practitioners. The function of this council is to advise the Minister upon any such general matters as it thinks fit, relating to the services provided by the act, or to any services provided by local health authorities in their capacity as such authorities.

A standing advisory committee may be set up at any time by the Minister to advise him and the central council on special aspects of the service. These committees will consist partly of members of the council and partly of other persons and will be appointed by the Minister after consultation with the council and with such organizations as the Minister may recognize.

All existing hospitals (public or voluntary, teaching or non-teaching) pass to the control of the Minister and their staffs will be in the employment of regional hospital boards appointed by the Minister. At the same time the Minister is empowered to supply separate pay-bed accommodation at these hospitals, and specialists or general practitioners who are on the staff of such hospital can charge fees subject to a maximum scale. The patient, however, always has the right to transfer to a non-paying bed at any time.

Any medical practitioner can join the service and will then come under the control of a medical practices committee. This committee will consist of nine members, seven of whom must be medical practitioners. When a practice becomes vacant or in the opinion of the above committee there is need for additional practitioners in a particular area, applications are called for to fill these positions. If there are more applicants than necessary the medical practices committee will select the person or persons required, but any one whose application was refused will have the right of appeal to the Minister, and to the Minister only. Where possible, the practices committee must consult the other practitioners in the district so that they may have some choice in the selection of those with whom they will have to work.

All sales of practices are forbidden once one joins the service, but compensation for the goodwill of such practices has been provided by the creation of a special fund. When a practitioner dies or retires for any reason, he will receive compensation. In the meantime all who have joined the service will receive interest at the rate of 2½% *per annum* on the capital value of the goodwill calculated from the appointed day until compensation is due. Any doctor who, because of age or infirmity, does not enter the service on the appointed day will be entitled to compensation just as though he had joined the service.

A special tribunal will be appointed to investigate any charges made against a doctor and can punish those whom it sees fit to punish. Any appeal against such punishment can be made to the Minister only.

The Minister has the power to set up health centres, child welfare centres, ambulance services *et cetera* wherever he may think fit. The ancillary services, such as pharmaceutical services, dental services *et cetera*, are also provided for under this act.

So that all practitioners in Britain might be made *au fait* with this act, a copy of a report on the act was sent to everyone on the medical register together with a brief explanatory letter from the General Secretary of the British Medical Association, and a plebiscite was taken. This form asked: "Do you desire the negotiating committee to enter into discussions with the Minister on the regulations authorized by the National Health Service Act?" and each person was to answer "Yes" or "No". The result of the plebiscite was 37% voted "yes", 55% voted "no" and 8% did not reply.

As a result it was first decided that a letter be sent to the Minister advising him that the committee (that is, the negotiating committee appointed by the Representative Body of the British Medical Association) was unable to enter into discussions with him on the regulations. To this the Minister replied that he hoped that before any final decisions were made, wiser counsel would prevail, and he felt sure that the profession would take no steps that would make it difficult for them to take part in the comprehensive health service which the people of the country desired, that as he had a clear duty to perform to carry out the act, he would immediately commence to consult all the other interests which would be concerned in the act.

These wiser counsels did prevail and following a letter from the presidents of the three Royal Colleges, negotiations on the regulations are now proceeding.

The main objections to this or any similar act which may be framed in this country are as follows—and here I can only repeat those on which the Parent Body in England have so frequently insisted and with which, I am certain, the majority of us agree.

We are opposed to any form of service which directly or indirectly leads to the profession as a whole becoming full-time salaried servants of the State or local authorities.

We should remain free to exercise the art and science of medicine according to its traditions, standards and knowledge, the individual doctor retaining full responsibility for the care of his patients with freedom of judgement, action, speech and publication.

The citizen should be free to choose or change his or her family doctor and to choose the hospital at which he should be treated.

Every doctor, like every other worker, should be free to choose the form, place and type of work he prefers.

Every registered medical practitioner should be entitled, as a right, to participate in the public service if he so desires.

There should be adequate representation of the medical profession on all administrative bodies associated with any new service.

Whatever the future holds for us, we must remember that we have a duty to perform both to the public and to ourselves. In any national health service we must see that the best possible service is given to the public and that we, as a profession, are fairly treated. Both must be protected, for in some schemes that have been placed before us the public can obviously be exploited. In others,

we, as a profession, would be exploited. If we combine as a profession and have the will to resist any unfair measures that may be foisted upon us, I am certain that an equable type of service can be evolved—one which would be fair to all. We must drop our individuality, must forget our own personal opinions.

Whatever happens, however, we must preserve that which we value most of all—our freedom. We as a nation have fought many battles to preserve this our most precious inheritance and we must not allow it to be taken from us now.

You have elected men to your Branch Council and they in turn have appointed delegates to the Federal Council. It is to them that we must leave the negotiations which are bound to take place. You must give them your whole-hearted support.

CLINICO-PATHOLOGICAL OBSERVATIONS ON LUMBAR INTERVERTEBRAL DISK PROTRUSION: AN ACCOUNT OF 53 CONSECUTIVE CASES TREATED BY OPERATION AT ONE CENTRE.

By DOUGLAS MILLER and G. VANDERFIELD,
From the Neurosurgical Centre, 113 (Concord) Military Hospital, Sydney.

DURING a period of twelve months 107 patients with presumed intervertebral disk sciatica were treated in this neurosurgical service. All patients were referred by other departments, and most had already been treated conservatively in various ways. Fifty-three of these patients came to operation. An analysis of their clinical states and a correlation with operative findings form the substance of this paper, together with the basis on which the diagnosis generally was made. Absolute immobilization in plaster of Paris for a month was adequate treatment in many cases, and these, being without operative confirmation, are not included in the detailed analysis. No cases of back pain alone have been included. Investigation of the histories shows variable factors, and no constant story is obtained.

General Diagnostic Consideration.

The following is a general diagnostic consideration of the series.

History.

Mode of Onset.—In the 53 cases of intervertebral disk syndrome the onset was sudden in 31 cases and insidious in 22.

History of Injury.—A history of injury was given in only nineteen cases. The types of injury recorded were lifting strains, falls, "twist" while playing games, strains while driving jeeps, being thrown from moving vehicles, and direct hits by a motor-car. Of the 32 cases in which the onset was sudden, 13 were associated with some immediate injury. In the remainder no history of injury was obtained. Out of 22 cases in which the onset was insidious, a history of injury was obtained in seven.

Course.—In 36 cases multiple preceding attacks had occurred. The average duration of previous severe attacks was eight weeks, the periods varying from five days to four months. The average duration of current attacks was three months, the periods varying from three weeks to seven months.

Duration of Symptoms.—The average length of history in the cases of disk protrusion in which operation was undertaken was nineteen months. The shortest history was that of a medical officer with symptoms of three weeks' duration, and the longest that of a senior officer who had endured his complaint for five years.

Aggravating Factors.—Forty-two patients complained that the pain was made worse by coughing, sneezing, bending, and by movements of the lower part of the back. Other aggravating factors were prolonged walking, standing or sitting, exercises, and especially "straightening up" suddenly.

Physical Findings.—Many tests have been devised to aid the diagnosis of intervertebral disk sciatica, but the eponyms for these are unlikely to achieve immortality for their inventors. There are two sets of abnormal findings, those due to muscle spasm and those directly attributable to radicular irritation or pressure. Of the first set the following are noted.

Restricted Movements.—Restricted movements are noted during examination, for almost invariably extreme caution is shown in the movements of undressing, getting onto the examination table and turning over. Many patients walk with a limp, the knee on the side of the lesion being held flexed to spare the pain. It is during the performance of unconscious movement that the neurotic or malingerer is first likely to be suspected.

Scoliosis.—Scoliosis with convexity to the contralateral side is often observed. Convexity to the same side was seen in eight cases. In 32 out of 45 cases in which operative findings were positive, scoliosis was present. In three out of eight cases in which operative findings were negative, scoliosis was present. One man had pronounced alternating scoliosis, but could not straighten his spine.

Spinal Mobility.—Decrease in the mobility of the lumbar part of the spine was almost a constant feature, full flexion being present in only two of the cases in which operation was undertaken. Most patients were unable to reach below their knees.

Muscle Spasm Signs.—There are three muscle spasm signs, Lasègue's sign, hamstring spasm and limitation of straight leg raising. These three signs were usually present together and to a similar degree. In all but three of the cases in which operation was performed Lasègue's sign was elicited and hamstring spasm was present, both signs being pronounced in thirty cases. In only three cases in which the operative findings were positive was neither Lasègue's sign nor hamstring spasm present. Straight leg raising was usually limited to about 35° or 40° in the 32 cases in which Lasègue's sign and spasm were present, and in most of these straight leg raising on the contralateral side was limited to a lesser degree, because of pain on the affected side. In the remainder it was limited on an average to 70°, and only in a few was the opposite side affected. This sign is therefore merely a counterpart of the others.

Paravertebral Tenderness.—Paravertebral tenderness was present in about half the cases and was extreme in a little more than half these. The paravertebral tenderness showed no consistent relationship to the above signs. This is shown in the following cases (Table I).

TABLE I.

Case Number.	Lasègue's Sign.	Straight Leg Raising Limited to.	Paravertebral Tenderness.
I	++++	10°	+
II	+	30°	+++
III	+++	45°	++
IV	+	75°	−
V	−	90°	+++

Accurate Localization and Associated Fallacies.

The signs which are due to radicular irritation or pressure often add some accurate localization to the general diagnosis. However, these may be fallacious, and the nervous signs may thus be of only general value.

Radiation of Pain and Paræsthesia.

When radiation of the pain or paræsthesia extended down to the foot and toes, it was referred to the great toe in five cases. Four of these were proved to be due to disk protrusion beneath the fifth lumbar nerve and one beneath the first sacral nerve. The other area of reference was to the lateral toes and outer border of the foot and was observed in ten cases. Six of these were due to protrusion beneath the first sacral nerve and the remainder beneath the fifth lumbar nerve.

Areas of Altered Cutaneous Sensibility.

Areas of altered cutaneous sensibility were noted in 28 of the cases in which operation was performed, hypalgesia being present in 27 cases and hyperæsthesia in one. The commonest areas were the postero-lateral part of the calf, the lateral malleolus, and the outer border of the foot in proved lesions affecting the first sacral nerve, and the postero-lateral part of the calf, the back of the calf and the great toe in lesions affecting the fifth lumbar nerve. No definite significance could be attached to the area of hypalgesia; for example, in one case of protrusion beneath the first sacral nerve the fifth lumbar dermatome was marked out by the analgesic area.

Ankle Jerk.

Alteration of the ankle jerk is of importance in the general diagnosis and in indicating the level of the lesion. It was either absent or greatly depressed in 32 cases. In all of these the findings at operation were positive—an intervertebral disk lesion beneath the first sacral nerve in 22 and beneath the fifth lumbar nerve in seven. It is therefore a sign of great importance. Of 30 cases in which the lesion was beneath the first sacral nerve, the ankle jerk was altered in 20. In 19 cases in which the lesion was beneath the fifth lumbar nerve, the ankle jerk was altered eight times.

Depression of the Knee Jerk.

The knee jerk was depressed in five cases. In all these the lesion was beneath the first sacral nerve, and in four of them depression of the knee jerk was associated with alteration of the ankle jerk on the same side.

Other Aids to Diagnosis.

X-Ray Examination.

All patients had routine X-ray examination of the lumbo-sacral part of the spine and of the hip joints, to exclude bony disease. In three cases only was a definite narrowing of the intervertebral space reported. In two of these a previous operation had been performed for an intervertebral disk lesion. In one case, in which exploration gave negative findings, X-ray evidence of diminished disk space was also present. No significant bony lesion was seen in any other cases. Two patients who presented themselves under suspicion of intervertebral disk lesion were found to have X-ray evidence of bone disease; one had a secondary new growth of the hip joint, and the other tuberculous disease of the lumbo-sacral joint.

Lumbar Puncture.

Lumbar puncture was reserved for cases in which the presence of a tumour could reasonably be suspected. It was performed in six cases, and in all but one the findings were normal. In one, the cerebro-spinal fluid protein level was increased to 50 milligrammes *per centum*.

In four of the cases in which there was no suspicion of tumour, lumbar puncture was also performed and the cerebro-spinal fluid was found to be normal.

Contrast Myelography.

Contrast myelography was not used in this series.

Prediction of Site.

A pre-operative diagnosis of vertebral level was attempted in 43 cases, and was correct in 35 and incorrect in eight. In the cases in which the diagnosis was incorrectly predicted, the ankle jerk was the misleading factor, being present in some in which the lesion affected the fifth lumbar nerve, and absent in some in which the first sacral nerve was affected.

In general it seems that pain and paræsthesia radiating to the lateral toes and an alteration in the ankle jerk favour a lesion affecting the first sacral nerve, and that pain and paræsthesia radiating to the great toe favour a lesion affecting the fifth lumbar nerve. However, sometimes these indications are deceptive; for example, in one case both pointers to a lesion affecting the first sacral nerve were present, but the protrusion was found beneath the fifth lumbar nerve. Actually the mistake is not of great practical importance, as it is customary and simple to make an interlaminar exploration of the adjoining space when the suspected space is found to be normal. It is, of course, possible that, in cases in which neurological signs of level are deceptive, there may be some abnormal fixation of the plexus.

Diagnostic Value of Immobilization.

All patients with disk protrusion gain relief from adequate immobilization in plaster of Paris. We have used a short leg spica carried from the costal margin to the knee. Of the patients who were subjected to operation, 24 had a preliminary period of immobilization in plaster, which gave them relief until it was removed. Failure of such immobilization to give relief would raise doubts about the diagnosis of a disk lesion.

Indications for Conservative Treatment.

Most patients before their admission to the neurosurgical centre had had some treatment. Nearly all had had some form of physical therapy. Temporary relief was noted after infra-red irradiation and short-wave treatment to the lumbar region; but symptoms were aggravated by massage and exercise. A number had gained temporary relief after rest in bed. Many had been given salicylates and vitamin *B*, no doubt with pious hopes, but without effect. After their admission to this service conservative treatment was preferred if the symptoms were not severe and the picture was not fully developed. The method was immobilization in a short leg spica for a period of one month. If the patient experienced relief it was considered a pointer in favour of a somatic lesion, and often this treatment proved in the milder cases to be a sufficient therapeutic measure. This was so in 54 cases. Local anæsthesia or epidural injections and low back manipulation were tried in a few cases without much success.

Operative Treatment.

Indications for Operation.

The following groups of patients were submitted to operation: (i) those whose lesion was undoubted, and who had real disability and definite signs of nerve root compression or irritation; (ii) those whose symptoms did not respond to conservative measures; (iii) those whose response to treatment was not sustained.

TABLE II.
Negative Findings.

Case Number.	Radiation of Pain.	Severity.	Signs.	Effect of Plaster of Paris Spica.	Findings at Operation.	Result.
I	To toes.	Moderate.	+	No relief.	*Ligamentum flavum* hypertrophy.	Some benefit.
II	To right calf.	Moderate.	++	No relief.	*Ligamentum flavum* hypertrophy.	Some benefit.
III	To calf.	Mild.	+	No sustained relief.	Swollen nerve, "neuritis".	Some benefit.
IV	To knee.	Minimal.	Almost nil.	No sustained relief.	Swollen nerve, "neuritis".	No benefit.
V	To great toe.	Moderate.	++	No relief.	Swollen nerve, "neuritis".	No benefit.
VI	To calf.	Moderate.	++	No relief.	Bony osteophyte.	Some benefit.
VII	To toes.	Moderate.	Minimal.	No relief.	Nil.	Some benefit.

Type of Operation Performed.

Interlaminar exploration was performed firstly at the predicted site of the affected nerve, usually without the removal of any bone. If a protrusion was present, incision of the longitudinal ligament, removal of the degenerate disk material, and curettage of the sinus were performed. Sometimes the removal of part of the lamina was found necessary to gain adequate access to the nerve. When no protrusion was found, the nerve sleeve was displayed fully throughout its length and mobilized. No arthrodesis of the spine was ever attempted.

Cases in which the Operative Findings were Negative.

All patients were operated on with a pre-operative diagnosis of intervertebral disk protrusion. In 46 cases the pre-operative diagnosis was found to be correct. In the remaining seven cases, varying conditions were found. In three there was undoubted hypertrophy of the *ligamentum flavum* with some intervertebral space collapse. In two, neuritis of the posterior nerve root was found, without any demonstrable cause—in one a bony osteophyte was present, and in the other no abnormality could be seen. There was therefore only one case in which the findings were completely negative.

Correlation of Operative Findings with Severity of Symptoms.

Of sixteen cases in which the protrusion was massive, the symptoms were very severe ("+++") in eleven.

Of 30 cases in which a moderate protrusion or only a degenerate disk was found, symptoms were only moderately severe ("+" to "++") in 28 cases. In one of the cases in which symptoms were severe manipulation of the back had recently been carried out, in the other an hypertrophied *ligamentum flavum* was present besides the moderate disk protrusion. In the seven cases in which no disk protrusion was found, the symptoms were relatively mild and the signs inconclusive (Table II).

Results of Operative Treatment.

The results of operative treatment were judged by the patient's ability to return to normal activity.

1. Of the 46 cases in which a protruded disk was removed, immediate and mostly dramatic post-operative relief of pain was experienced in 37 cases, and all these patients were fit to return to duty six weeks after the day of operation. In the other nine cases relief was delayed, and a period of immobilization of one month in a short hip spica was considered necessary in eight. This meant an average of three months before the patients were fit for duty. Six were then fit for duty, but the other two had slower remission; however, when they were reviewed six months later they were fully relieved. In the ninth case the patient was undergoing his second operation, and although he immediately experienced partial relief, full remission took six months.

2. In the seven cases in which no disk protrusion was found, partial relief was gained, four of the patients being enabled to return to duty within two months. Two had very little back disability after four months, and one was not relieved at all.

Late Results.

This is a recent series, and no account of late results can be given. It is to be noted, however, that all the patients were servicemen, active or discharged. Similar numbers have been treated according to the same practice for three years, and those with recurrences must naturally be referred to this centre. During the year we dealt with three recurrences, and they appear in this series. Two of these recurrences were on the contralateral side and one only at the original site.

Summary.

One hundred and seven patients were diagnosed as suffering from intervertebral disk syndrome; 53 of these were operated on for various reasons. Forty-six of the patients subjected to operation had disk protrusions; the remainder had other findings.

The clinical features are analysed and their correlation with the underlying lesion is studied. The immediate end results are reported.

Generally the most severely affected patients had the most extreme pathological condition at operation. In this type of case the most immediately satisfactory result was obtained.

In milder cases the pathological conditions were less well developed, and recovery was sometimes slower. Negative findings at operation were followed by the least satisfactory convalescence.

THE MANAGEMENT OF A PATIENT WITH AN ANXIETY STATE.[1]

By G. B. MURPHY,
Brisbane.

As my subject tonight I have selected the most common of psychopathological reactions, which is widely referred to as an anxiety state, but which appears under a great variety of forms and names. While there is adequate reason for the variety of symptoms, the rather loose and vague terminology used to describe them is often unnecessarily confusing. Much of psychiatry deals with the emotions and the intangible—the abstract in other words—and we have no clearly defined set of terms with which to describe and express these ideas. Consequently, a multiplicity of authorities has resulted in a multiplicity of terms, all endeavouring to formulate similar concepts. The theories that have been advanced to explain much psychopathology have to many seemed fanciful and bizarre. Even the inventors of such theories clearly state that some of their hypotheses are only tentative and are far from expressing the absolute truth. We shall do well, I think, to leave the research student with his fertile imagination and highly speculative theories, and to turn our attention instead towards a more constructive approach and to the practical methods that have been found effective in the treatment of this disability.

There is a great deal in psychiatry that is universally accepted and does not require a highly technical knowledge for its dissemination. In fact, in the practice of psychiatry it is necessary to convey a certain amount of psychology to the patient, and this must be done in terms and expressions that he can comprehend and upon which he can act. It has been said, with a good deal of truth, that the majority of patients examined in general practice have insufficient physical disabilities to explain their symptoms, and that a large number of complaints are partly or completely functional.

The general practitioner has many opportunities that are not offered to the consultant of viewing the patient in his home surroundings. He can thus gather a great deal of information relating to the patient and his environment, and is better able to see what the former is not able or not likely to describe. To suggest that all psychiatric patients should be examined and treated by a psychiatrist would result in a vast majority of them receiving no attention. The majority of psychiatric patients are treated by general practitioners and physicians.

In my experience, a great deal of medicine is given without any true scientific reason. It may also be said that it is not possible to treat a patient satisfactorily, even with what we consider are proven scientific methods, if we do not endeavour to allay his fears, congratulate him on his progress, explain his reverses, and anticipate with him his return to normal health. In other words, every good physician and surgeon must have a sound psychological approach to his patient.

In my brief discussion of the subject I propose first of all to give some general account of what may conveniently be described as the emotional basis of an anxiety state,

[1] Read at a meeting of the Queensland Branch of the British Medical Association on May 2, 1947.

and then to indicate the symptoms that are commonly encountered as well as methods of treatment.

In all the neuroses the most common and important reaction is that of anxiety. The terms "anxiety neurosis", "anxiety syndrome" and "anxiety state" may have different meanings for some; but that one element of anxiety is the same in all. It is not important from the point of view of treatment to be able to apply an all-covering name; it is, however, essential in these nervous disturbances to recognize the emotional quality behind them, which is the real basis of the multiplicity of symptoms presented. It is desirable that all patients, no matter what their complaint, should be assessed from two points of view—the one physical, the other emotional or psychological. This is becoming steadily more obvious—for example, in gynæcological operations, or in any condition in which the subjective symptoms outweigh the objective pathological findings.

It has been said that all the neuroses and their symptoms arise from some disturbance in the emotional state. It is worth while to dwell for a moment upon this idea. Emotion places the colour in life; it is responsible for our likes and dislikes; it is controlled by the fundamental principle of seeking pleasure and avoiding pain; it represents a primitive, childlike reaction to circumstance. It can be, as it usually is in the adult, subservient to reason; but when for any cause the emotional tension rises above a certain level, we are unable to control ourselves, we become irritable and annoyed, and we obtain relief from the tension by swearing, shouting or crying or by some similar violent emotional expression.

Emotional tension, excitement or a thrilling experience is something which we can all appreciate for its ability to relieve monotony and to add interest to life. However, when the degree of emotional stress rises beyond a certain level, which varies with the individual, we experience discomfort, and this feeling becomes emotionally painful and pathological. Thus the medium course on the scenic railway at a Luna Park is sufficiently thrilling for most people, while the "Big Dipper" would raise a feeling of anxiety that would be frightening and emotionally painful.

It would seem that a well-organized life maintains a happy balance between emotional tension and reason, with only an occasional deviation from this balance. If the tension or stress rises beyond a certain degree, one feels the necessity of lowering it by one of two ways—either by removing the cause or by releasing the tension, that is, by an emotionally charged word or deed. Removing the cause is the more constructive, more permanent and more radical method, but may not be easily accomplished. This radical approach, or removing the cause of the state of emotional tension, is in fact the object of psychotherapy.

What, then, are likely causes of emotional tension? They may be conveniently divided into material causes and abstract causes. Material factors are easily appreciated; a few typical examples are acute financial difficulties, unhappy domestic relationships and an uncongenial or too exacting occupation. Abstract causes are a good deal harder to grasp; but it appears that they are often the crux of the whole problem in these anxiety conditions. They will always have as their basis some material factor, though it is seldom that the patient can recognize this at its full value. They are compounded of the hopes, fears and disappointments of the patient and will frequently include feelings of frustration and resentment. A typical example of the working of such an abstract cause is seen in the case of the mother of several children, who has no outside assistance and who is in consequence rigidly limited in her sphere of activities. She may say that they have a sufficient income, that she loves her husband and children and takes a pride in her housewifely duties; yet something has gone wrong somewhere, and careful discussion will usually reveal some such abstract cause as those mentioned above—an unconscious resentment against a way of life which demands so much and offers (to this particular person) insufficient compensation.

It is important to stress that these factors will always vary in their effect according to the individual; while one man will make a worthwhile effort to shoulder the burden of financial difficulties, another will give in at once and completely at the first hint of any trouble; one woman will continue to be the mainstay of her home despite trials of sickness and so on, while another, who perhaps did not honestly accept the obligations of marriage in the first place, will unconsciously take refuge in physical ailments when its responsibilities become too irksome.

Material conditions may be relatively simple to adjust when it is clear that any one factor is causing serious emotional disturbance. On the other hand, when the condition cannot be altered, then it is obvious that for peace of mind the patient must make some change in his attitude towards this factor. A similar method is followed when abstract causes are involved—that is, their importance is discounted, and other means of emotional release, such as sport, social activities or hobbies, are substituted.

The essence of the problem is, why does a particular person no longer fit into his environment? Most personalities are satisfactorily adjusted when the subjects are living under limited stress; but when that stress becomes excessive, symptoms appear. Conversely, when and where symptoms appear, we must look for the cause of emotional disturbance. The various factors may be operating over some time before their effect becomes apparent; then again there may be an accumulation of several factors, the last addition bringing the condition to a pathological level of emotional tension. This is perhaps the more common development.

Someone writing authoritatively in the newspapers recently stated that psychiatrists were still too oversexed. This rather severe misstatement has a grain of truth, inasmuch as too much emphasis has been placed on sexual disturbance as a basis of psychopathology, to the exclusion of more mundane causes as the reason for emotional tension.

A moment's reflection will indicate that a great deal of our time is spent in abstract contemplations which are only indirectly connected with material objects. These include our plans, day dreams, opinions generally, and political and religious views. It is probable, therefore, that for many people the origins of their psychological disturbance will be revealed in these day-by-day reflections. The reasonably intelligent and practical person, accustomed to looking for cause and effect to the best of his ability, will usually endeavour to find the causes of his emotional disturbance. In everyday language, they are described as worries, and they usually concern what we have called material factors. When these causes have been examined and dismissed, many patients are at a loss for further inspiration. They feel that only a really serious financial or domestic upheaval, for example, could produce the symptoms they are experiencing, and they cannot appreciate that their own attitude to material "worries", influenced by the ideas and opinions of those about them, can produce any gross physical disturbance. It is little wonder that they fail, when we consider how many philosophers since time began have been striving to interpret human thinking and explain human behaviour, and how incomplete the record still is.

I have thought it worth while to include here a list of abstract causes (incomplete, of course) which will indicate some of the attitudes and reactions most frequently observed in this condition. First of all comes self-respect and the respect in which we are held by others; anything that interferes with these produces resentment, suspicion and envy. Ambition, self-reliance and independence assist the individual towards his goal; if he is baulked in any way, disappointment, ungratefulness, lack of appreciation and frustration may be the result. Any transgression of moral, ethical or religious standards, any failure in responsibility, will produce feelings of regret, disgrace, shame and guilt. Finally, specific fears may be present—for example, fears of hereditary nervous disabilities, fears of insanity from masturbation or bizarre or improper thoughts. A minor nervous upset may be magnified in importance by the consideration that anything in the nature of a nervous or emotional disturbance is a sign of weakness. These form some of the types of the abstract causes which the careful observer can detect as the patient relates his story. It seems often that the patient has some not very well-defined idea of what abstract causes are

important, for with little prompting he will endeavour to describe or give examples of some of the trials of his life, after excusing himself with such expressions as: "I don't know whether it is important, but I thought I would tell you."

Management of Anxiety State.

We come now to the more practical approach to our subject. As a general rule the diagnosis of an anxiety state presents little difficulty. A catalogue of elaborate and fantastic symptoms that seem to spare no organ and to be limited by no anatomical boundary suggests functional disturbance when physical examination and any special investigations have excluded the possibility of organic disorder. It should be noted, however, that functional disturbances may be grafted on organic disabilities, which should, of course, be treated in conjunction with the emotional upset. The part played by anæmia or urinary infection, for example, should be explained; but the emphasis should be on the emotional disturbance, which is much harder for the patient to grasp and appreciate.

The keynote of the train of physical symptoms associated with an anxiety state is found in the hyperexcitability of neuro-muscular function, and in a general feeling of over-awareness, giving rise to such additional symptoms as irritability, jumpiness, tremor of the hands, frequency of micturition, easily satisfied appetite due to hypertonicity of the stomach, and insomnia. With regard to the last-mentioned condition, it is found that going off to sleep takes some hours, to be followed often by restless sleep interrupted by anxiety dreams of falling, being in danger, and the like. This state of tension persists throughout the twenty-four hours and results in tiredness in the morning—the accountant having dreamt of innumerable figures that will not balance, and the harassed housewife going through the mental anguish of snatching her children from danger throughout the night.

Tiredness, both physical and mental, is a frequent symptom, and is consequent upon the patient's not being able to relax satisfactorily, day or night.

The typical neurotic headache, described as being a tightness or feeling of pressure, is referred to the frontal and suboccipital area, extending down into the neck muscles. It is not varied by posture or by increase in the intracranial pressure—for example, by coughing or straining. It is not severe, but often lasts for days at a time. It is not relieved by aspirin, but is often relieved by some form of sedation; it is always worse after any increased emotional stress. It is sometimes relieved, or becomes less conspicuous, when the patient is working or preoccupied.

There are a large number of other symptoms which need not be described here, but which include the well-known manifestations of hysteria. It should be realized that anxiety or emotional tension is the fundamental disturbance in hysteria. Many a dramatic cure of an hysterical patient by suggestion will be followed in a few days by the appearance of anxiety symptoms.

The first interview is well spent if one allows the patient to tell his story fully, and if one can correlate his emotional disturbance with his symptoms to his satisfaction. This is the first major step in treatment, and it is only gradually that the patient fully realizes it. I have always found it better to allow the patient to give fully his evidence-in-chief, asking only such questions as "Does anything make it better or worse?" before taking his symptoms and presenting them to him as an emotional upset. Otherwise one finds oneself being corrected on points of fact, which is rather disturbing and tends to rob one's argument of force.

A great deal of a patient's difficulties and environmental disturbances can be learnt from his relatives and immediate associates, and this interview should always form part of the initial examination.

One may begin by correlating in one's mind such factors or circumstances as seem to have occurred or been present about the time that symptoms appeared, being aware all the time that more than one disturbing factor may be necessary to produce symptoms. One should endeavour to direct the patient's interest away from his symptoms towards the environment in which he lives, guiding his thought to some extent by asking for his candid opinions about his work, his associates, his family, his parents, brothers, sisters and children, also his financial position, his prospects, ambitions, security, his recreations and interests apart from his work. Each of these themes is capable of considerable elaboration, and one cannot give each equal attention. It is a fact that those circumstances and conditions which are likely to be the most frequent source of disturbance are those that have the greatest emotional significance. Thus, of primary importance would be self, self-esteem, and security in its widest sense, covering health, sanity, finances, affection, home, wife and children.

It has been said previously that emotional tension is the key to the explanation of an anxiety state. We are asking our patient now to describe an emotional feeling—an entirely abstract feeling. It is clear that this is not a very easy task; but his emotional feeling can be assessed in some measure by his attitude towards various material incidents or persons in the course of his story. It is not sufficient for the doctor to appreciate that his patient's symptoms are of emotional origin, nor is it sufficient simply to tell him of this fact. It is necessary that the patient should be convinced of the state of affairs. In order to drive this point home it may be necessary to take one or two incidents from his story to illustrate the occurrence or increase of symptoms under emotional stress. It is often useful to draw an analogy from some comparable situation in everyday life. As an example, to explain the emotional basis of chronic physical fatigue is not altogether easy; but a moment's reflection will bring several comparisons to mind. The trapeze artist at the circus has his audience in a state of acute anticipation for his welfare. When his act is finished, the audience sighs with relief, wipes the sweat from its brow and is conscious of having made a very material effort, which is in reality only an emotional effort following an acute anxiety incident. To take another illustration, dizziness and giddy turns are symptoms that often require elaboration for the patient, since they invariably suggest heart disease or worse. Anyone reading the newspaper accounts of the Anzac Day parade will have noticed that the ambulance bearers in attendance were called upon to treat many spectators who fainted or collapsed. In the majority of these cases it would be found that the only unusual factor was the greatly heightened emotional tension which is always associated with such a function. Some explanation and elaboration along these lines will assist many a patient to see himself and his troubles objectively.

It can hardly be necessary to have an elaborate classified psychology in order to treat a neurosis. Most of the important factors are common to all theories, and non-technically are labelled "common sense". We can all appreciate that time is the really essential element in the healing of a hurt, even when the patient has a full realization of the cause and effect underlying his disturbance.

It seems useful in the first interview to formulate some ideas to the patient as to the cause of his emotional disturbance, always with the open mind that the conclusions drawn on this one occasion may not be the entire picture; but it is most necessary that the patient should be given some specific directions to help him overcome his difficulties. In this regard it is a wise policy not to be too free with suggestions, but rather to let the patient make the decision. One can often help best by presenting to him alternative situations, and insisting that he face the position squarely and pursue one course to its logical conclusion.

There are some anxiety reactions of which the elucidation is very difficult; this may be so because the patient has not the intelligence to realize emotional cause and effect, or perhaps he is unwilling to cooperate fully and discuss his innermost failings, lest he be exposed to ridicule, or perhaps too because the anxiety reaction is really only the initial phase of a more profound disturbance that may end as a psychosis. The rationalization or understanding of a psychosis requires all the elaboration that the full psychoanalytical theories can afford and consequently need not concern us here.

To understand the difficulty that may be presented at this stage, one should realize that many manifestations of anxiety can be interpreted as being purposeful in their disabling effect.

Thus, a man who was found to have had an old bony injury to his neck, received treatment on account of muscular pains which he was experiencing. He gained the impression that his neck was seriously injured and that he must exercise great care. He commenced working as a labourer, and before long experienced further pain in his neck. This gave him great concern, as his financial position necessitated that he should continue to work. On the other hand, he was not sure whether his condition was as simple as the doctors made out. He developed aches from head to foot so that he could hardly move his body without discomfort. He was tremulous, worried and unable to sleep, and it was not long before he found himself in hospital. His difficulty was something like this: "I must work to live, and when I work I may dislocate my neck and paralyse my body." (Apart from his old bony injury, no abnormalities were found in any system.) Sedation and reassurance relieved his immediate symptoms, and in about two weeks he was symptom-free in hospital. He then required some moral and some financial assistance until he found a suitable light occupation.

Viewed in one light this sickness is purposeful, as it places the responsibility upon someone else, who, if he is to make the patient work, must lighten the patient's burden.

Financial assistance, moral support and interest in our patient's social adjustment are things that our more enlightened civilization should afford to those of our members who may be less intellectually, emotionally and financially endowed than others, and who become weighed down by the cares and the burdens of life.

In addition to all this pursuit of the cause of anxiety and its removal one must not forget quite another angle which is necessary for success—namely, to insist that the patient find some more satisfactory form of emotional expression, for example, in some hobby, sport or club. It often requires a little persuasion to make the emotionally tired person exert sufficient interest to do this. In the beginning it is sufficient if the patient will apply himself say for twenty minutes at a time or until such time as he feels he has had enough. If this rule is followed for several days, then it is not long before a greater degree of response is shown and further time can be spent at some hobby or activity. Pictures, reading, gardening are frequent interests; but the particular choice should be left to the patient. Those interests which he had before his illness are likely to be those which he can most easily resume.

The whole attitude should be one of a planned course in which dramatic results are not expected, but in which perseverance and patience will produce results. It is often important to point out that if others can overcome these difficulties, then it is surely possible for the patient to do so. Sometimes an element of a threat is necessary for those who are losing courage. It may be necessary to speak frankly and say that as there is no doubt about the emotional origin of his symptoms, these symptoms will remain just as long as he maintains his present frame of mind, and at such time as he starts to change his attitude he can expect improvement.

I always think it worth stating that in the beginning the progress is necessarily slow, and as a little improvement takes place he will find it more easy to apply himself more enthusiastically.

With all anxiety and worry it is necessary that the patient should be occupied as busily as possible. The question of giving up work depends on a number of factors—on its immediate effect on his disturbance, on his financial position, and on the alternative occupations he can pursue. Ceasing overtime work or evening classes may give sufficient respite to allow him to carry on with his main occupation.

A final consideration in the treatment is the use of drugs. I have found that mild sedation—for example, with 0·25 or 0·5 grain of phenobarbital three times a day, or some mixture with 10 grains of potassium bromide three times a day—is often useful in raising the threshold of resistance to emotional symptoms. It is always desirable to rest a distressed organ, and it seems to be an advantage in these emotional states. Some people can take advantage of a morning rest and an afternoon's sleep and find that they are more efficient in work that they try to perform.

For those troubled with insomnia, barbitone (5 to 10 grains), "Nembutal" (1·5 grains) and "Amytal" (3·0 grains) or *Mistura Potassii Bromidi cum Chloralo Hydrato* (20 grains) is helpful. It is necessary always to give sufficient to produce a clinical result; even if the dose at first makes the patient rather sleepy in the day time, he himself will quickly correct this. I always explain to the patient that medicine in nervous conditions is much like an aspirin for toothache; while it tends to relieve the condition it does not cure it, and the cure lies in the more practical and constructive approach to his emotional problems.

In the foregoing consideration of the ætiology of a neurosis or anxiety state I have laboured at some length the simplicity of the case. In this I have purposely excluded hereditary and constitutional predisposition, and have rather lightly touched upon personality deviations caused by difficulties in adjustment in early life. I have endeavoured to confine my attention to the specific cause of the immediate upset. Now this approach may receive severe censure from many; but its purpose is to make the approach to the neurosis more tangible and less mystifying, something that does not require a great wealth of theory, but little else than an appreciation of cause and effect, and a commonsense or practical approach to these causes.

It is necessary to appreciate that all anxiety states are not so simple as this method of approach has presented them; nevertheless a great many are simple, and it is towards the approach to this number that this particular article is directed. Some neuroses are complex in their cause; for example, a repressed and unrecognized homosexual tendency or a deep-seated dependence upon one parent may form an early pattern of behaviour that becomes repeated again in later life and results in an apparently inexplicable behaviour reaction, which can be understood only when the complexity of the life of the patient is revealed and so gives an indication of his adaptation to past difficulties.

It is not considered desirable to embark lightly upon a psychoanalytical approach to every neurosis. This procedure requires a great deal of time and results in a large quantity of irrelevant matter being discussed, and unless the patient is very slowly revealed to himself he may be overcome with increased anxieties and feelings of inadequacy, so much so that he feels incapable of ever handling the situation. He is pushed off his somewhat makeshift raft of adjustment and finds himself in a morass of uncertainty. Therefore it is necessary to take this process slowly, reintegrating the personality with one hand while breaking it down with the other. Those patients with a long-standing maladjustment will reveal themselves as such during the first interview, when the history of anxiety and fears, emotional disturbances and over-reactions will show that the most recent disturbance is just one of many. In these patients the constitutional factor is conspicuous, and it is reasonable to assume that the degree of recovery will be temporary or incomplete. It would take an excessively long period of time, even if it was assumed that they could be cured, to try to make a basic readjustment of their fundamental attitude. One must therefore endeavour in this group of constitutionally inadequate people to treat the immediate disturbance and be satisfied with an incomplete result.

A word may be said about adjuvants to the treatment of the anxiety state. Sub-coma doses of insulin may be used. The dose is sufficient to produce slight mental confusion, the patient remains in this state for two or three hours and the treatment is repeated on five days a week for three or four weeks. The rationale of this treatment is not fully understood; but it appears to release the constant emotional tension and therefore results in abatement of symptoms, and an easier approach to psychological adjustment is forthcoming. However, it is necessary for the patient to make these adjustments, otherwise the symptoms will surely recur as he resumes his responsibilities and confronts his difficulties. This method was used with conspicuous success during the recent war, in which the

environmental factors could be corrected by the medical officer if necessary—a responsibility he was much troubled in exercising, because he served two masters.

"Pentothal Sodium" is sometimes used to produce a state of narco-hypnosis and remove a feeling of restraint that some patients show about past and deeper psychological disturbances. However, it has limited applications and is rather a short circuit to reach causes for emotional disturbance.

Electric shock treatment is less effective when used in an anxiety state than in conditions associated with depressive and obsessional reactions, when retardation, both physical and mental, and ideas of self-criticism and guilt are present and a feeling of depression is experienced.

A period in hospital may be useful in the initial stages, partly to take the patient out of an unfriendly and unsuitable environment, and partly because it gives an opportunity for complete physical and mental rest. It is an occasion that may be grasped to punctuate the course of an emotional state, when both the patient and his associates will realize that there is something more than just "nerves" that can be disposed of by an effort of the will. He should not spend his time in hospital in bed, except perhaps for the first few days; he should have sufficient sedation to keep him comfortable and may be much more settled and improved if he does not have worrying or over-anxious visitors for one week or so. Subsequently he should be an "up patient" and fairly busily occupied, spending some time each day out of hospital, perhaps in walks, visiting or picture shows. Three weeks of such a régime with a better approach to difficulties and a better and more easily tolerated environment are often of considerable value.

Conclusion.

Before concluding, let me repeat myself a little in an endeavour to collect the scattered thoughts.

First, then, in the management of a patient with an anxiety state comes a fairly complete history, which usually necessitates an interview with the patient's relatives. This interview should last long enough to make perfectly certain in the doctor's mind that the condition is functional; if it is complicated by other factors, then these should be investigated. In this interview also, by examples taken from the patient's history, the occurrence or increase of symptoms during emotional stress should be pointed out to him. Some ideas of these causes, both material and abstract, should be gleaned from the history and presented to him as a partial, if not complete, explanation of his disturbance. Then a healthier attitude which he is prepared to maintain and a better form of emotional expression should be insisted upon. The assistance given at this stage should also convey a good deal of confidence in his ability to overcome his difficulties. This may be compared with the morale building which a commanding officer gives to his troops to make them believe in their ability to achieve anything they wish. Finally, the patient should be given something for symptomatic relief, while its purpose as an assistant and not a cure is explained.

Subsequent interviews should not be too frequent, lest perhaps the patient becomes too dependent upon his doctor and does not obtain the degree of self-reliance that is necessary for his comfortable existence, the lack of which has contributed largely to his symptoms. It is my experience that if the interviews occur more frequently than at intervals of ten days, the patient reaches this stage; more frequent interviews may be an advantage to a worried and troubled person in the beginning, but should not be permitted for too long. It should be one's object to let the patient feel he is becoming independent, and interviews at intervals of three weeks are usually sufficient. During these interviews attention should be directed to encouraging the patient to talk, not about his symptoms, but about factors and emotional disturbances and their correction.

Dependent upon the cause and the method of its removal will be the length of time it takes to relieve symptoms. Thus many farmers leading a worried and monotonous life are appreciably improved after a week in the city. Many other patients who have to change their attitude to factors that cannot be varied may take many months.

It is wise not to delve too deeply into the past psychological difficulties of persons who have obviously always been poorly adjusted, because one will soon recognize that one has a major operation upon one's hands and may not feel confident or willing to bring it to a successful conclusion; at any rate the process will be both difficult and prolonged.

With a friendly attitude of patience and sceptical benevolence, and with the use of one's knowledge of human nature and its self-interested principle, there is little doubt that one can do a great deal to help one's fellow beings in their emotional difficulties.

I recognize that these comments are rather scattered and disconnected, and that it is easy to talk and perhaps not so easy to practise. I have endeavoured to discount some of the wand-waving and mystery that are supposed to go on in a psychiatrist's consulting room; in this endeavour I hope I have not confused your previous ideas or offended my brethren by simplifying a subject that has been studied for thousands of years and is still in its infancy.

DIABETES INSIPIDUS IN PREGNANCY: REPORT OF A CASE WITH DISORDERED ACTION OF UTERINE MUSCLE.

By MAX LAKE, M.B., B.S.,
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DIABETES INSIPIDUS is chronic polyuria, with no abnormal substances in the urine, due to disorder of the pituitary hypothalamic complex.

The first case of *diabetes insipidus* adequately recorded was described by one Frank in 1794. Only a short time before this Willis had described the "honied taste" of the urine in *diabetes mellitus*, and Frank recognized the separate identity of *diabetes insipidus* from the lack of glucose in the urine, from its constant chronicity and from the absence of any change in the kidneys. Von der Velden and Farini, a German and an Italian worker respectively, published comments in 1913 on the efficacy of pituitary extract in controlling the polyuria and polydipsia. The first case recorded in THE MEDICAL JOURNAL OF AUSTRALIA was that presented by Dr. Sydney Pern to the Victorian Branch of the British Medical Association on September 6, 1922.[0]

The association of the syndrome with pregnancy is particularly rare, the incidence being approximately three in 50,000 pregnancies.[1] Henriet[2] in 1936 could find only 11 cases in the literature, and since then 14 extra cases have been found, to 1947. This twenty-seventh case has one feature never recorded previously—that is, disordered action of uterine muscle. This feature, like the polyuria, is probably due to posterior pituitary deficiency.

Report of a Case.

Mrs. G.E., aged thirty-two years, presented herself eighteen months ago with the following five principal complaints: progressive muscular weakness, gain in weight, increase in the size of the extremities, insomnia because of polyuria at night, nervous irritability for trivial causes.

There was further evidence of endocrine disorder in the form of polydipsia, diminished menstruation, absence of the *libido*, hirsuties of the legs, and coarsening of the features. Physical examination revealed no further abnormal clinical findings.

The patient had a pyrexia of unknown origin in 1931 at the age of seventeen years, during which she became lethargic and stuporose. This may have been an attack of encephalitis. She has since had two children (Figure I, A and B). In 1941, in the puerperium of her first pregnancy, she first noticed polyuria, the gain of four and a half stone in weight and excessive fatigue. In 1942 during the second pregnancy there was an exacerbation of the above-mentioned complaints. This pregnancy concluded with an instrumental delivery because of ineffectual uterine contractions. This dystocia may be directly related to deficient secretion of the posterior lobe of the pituitary, and will be emphasized later. No frank post-partum hæmor-

rhage occurred at any time. Subsequently the weight rose to a new height, but the polyuria declined to the elimination of six pints of urine daily (Figure I—dystocia during pregnancy B).

Conception occurred again early in 1946, and the excretion of urine rose to a record of thirteen pints per day. The patient's weight, which had fallen to ten and a quarter stone, commenced to rise again, concomitantly with the rise in polyuria.

Laboratory investigations were performed serially at intervals from 1944 to 1947. Normal findings were reported for blood and urine sugar content and normal results from the glucose tolerance test; the Wassermann reaction was not elicited from the blood or cerebro-spinal fluid; the

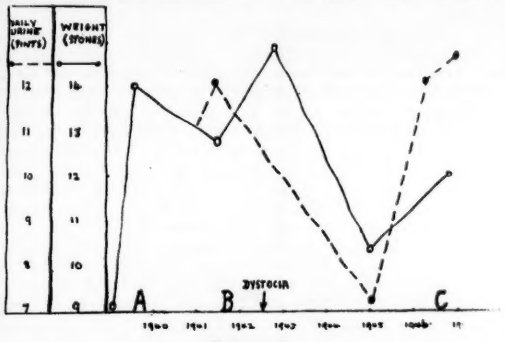

FIGURE I.
Graph of urinary output and weight in relation to the three pregnancies, A, B, C.

basal metabolic rate was normal, and blood cytology and chemistry were normal. The visual fields have shown no change from normal. The X-ray appearance of the pituitary fossa is normal, and there is no evidence of *hyperostosis frontalis*. The insulin insensitivity test produced a positive reaction. This test consists of the injection of soluble insulin and the plotting of the blood sugar curve for two to three hours afterwards. Normally the initial fall is followed by a steady rise to the previous fasting level within one hour. If the fall is maintained, this indicates that the pituitary control of liver glycogen is deficient. This is most frequently the case in Simmond's disease[8] (Figure II).

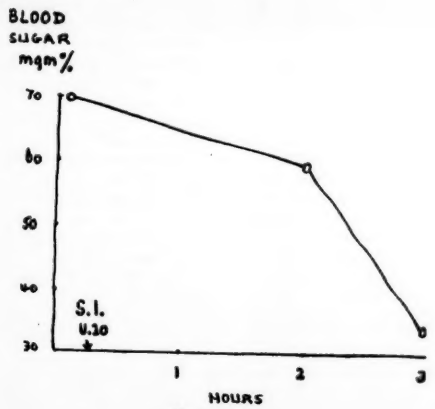

FIGURE II.
Insulin sensitivity test.

When the patient became pregnant for the third time, she was admitted to hospital for termination of the pregnancy. After one month's observation and treatment, dilatation and curettage were performed. The indications will be discussed later. Five days later vaginal hæmorrhage (which did not respond to the usual drugs) necessitated a further curettage, but the only debris removed was a small piece of ragged membrane. After further treatment with pitocin and ergometrine the hæmorrhage ceased, and it is more than suggestive that several large doses of pitocin were necessary. The patient was discharged from hospital soon after this; she still complains of weakness and of persistent polyuria, and her feet are still increasing in size.

Commentary.

The case will be considered from three aspects: (*a*) the mechanism of *diabetes insipidus*, its general ætiology, and the ætiology in this case; (*b*) the important clinical features of (i) the variation of the diabetes with pregnancy, (ii) dystocia in the second pregnancy, (iii) termination of the pregnancy; and (*c*) treatment, obstetric and medical.

Diabetes Insipidus.

The patient has features of two well-defined syndromes—*diabetes insipidus* and acromegaly. The presence of polyuria without glucose in the urine, *plus* polydipsia, and the absence of raised blood pressure and other abnormal urinary findings, indicate *diabetes insipidus*. Enlargement of the jaw and extremities, increased weight, weakness and menstrual disorder, furnish the diagnosis of acromegaly. From a consideration of the anatomy of the pituitary region, the ætiology of *diabetes insipidus* is explained more clearly (see Figure III).

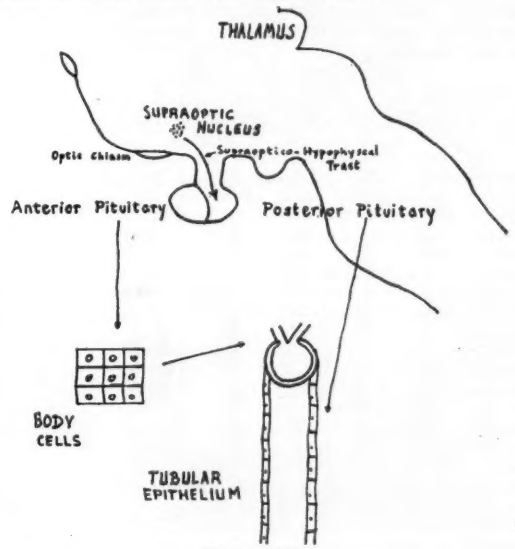

FIGURE III.
Diagram of neuro-hormonal relationships in the production of polyuria.

The posterior lobe of the pituitary is the source of pitressin. Pitressin supervises the reabsorption of water across the tubular epithelium of the kidney—in other words, it is the anti-diuretic principle of the pituitary gland. The supraoptic nucleus of the hypothalamus controls the activity of the posterior lobe of the pituitary by means of the supraoptico-hypophyseal tract.[4] Experimentally, a lesion to the tract causes *diabetes insipidus*. The anterior pituitary group of hormones, by their controlling effect on cellular metabolism, exert a diuretic effect on the kidneys.[5]

In health, of the 170 litres of capsular filtrate produced daily, approximately 169 are reabsorbed, because pitressin increases the renal tubular absorption. If the kidney is deprived of the stimulus of pitressin, for example, by atrophy of the posterior lobe of the pituitary or by disease of the supraoptico-hypophyseal system, then the passage of large quantities of dilute urine results, because of the absence of "buffer" to the anterior pituitary effect.

Dystocia.

Posterior pituitary secretion has a further well-known action. It is oxytocic. Experimental work by Fisher, Magoun and Ranson[10] has shown that cats and monkeys have great difficulty in delivering their young when *diabetes insipidus* has been induced by section of the pituitary stalk.

Opinion as to the necessity for the posterior lobe secretion in parturition has been divided even among those who have worked extensively on the subject in animals.

Fisher, Magoun and Ranson, as a result of experiments on seven cats, stated that evidence favoured the pituitary oxytocic factor playing a part in normal parturition. It is primarily with the intention of aiding the solution of this problem that this case has been reported.

Hitherto, in the 26 recorded cases of *diabetes insipidus* occurring in pregnancy, there is no mention of dystocia to confirm the experimental finding for the human. Therefore let me stress the fact that this patient had uterine inertia. The second labour was terminated successfully only by the use of pituitrin and by an instrumental delivery. Furthermore, after the curettage which terminated the third pregnancy, uterine contraction failed, and continued uterine bleeding occurred.

However, it is not to be inferred from one case alone that the dystocia of the experimentally diabetic cat and monkey is necessarily a significant finding in the human with this syndrome, because the uterine condition in this case could be quite unrelated. Nevertheless it is seriously suggested that posterior pituitary deficiency, besides causing the more obvious polyuria, was also the cause of the poor uterine response to the influences of parturition.

Ætiology of the Present Case.

With regard to the ætiology of this case, there are several possibilities. The first is tumour. Acromegaly usually results from an eosinophile adenoma of the anterior lobe of the pituitary, and pressure by such a tumour on the supraoptico-hypophyseal system or posterior lobe of the pituitary could cause *diabetes insipidus*. In 63% of cases *diabetes insipidus* is due to some tumour pressing on the pituitary hypothalamic system.[4] In approximately 10% of cases it is due to direct trauma, of which there is no record in this case. In the majority of the remainder it is due either to inflammations (principally syphilis and encephalitis) or more rarely to vascular lesions.

Both the blood and the cerebro-spinal fluid failed to react to the Wassermann test; but at the age of seventeen years the patient had a pyrexial illness which was probably encephalitis. Certainly the features of hypothalamic involvement are present. The polyuria, absence of *libido* and increased irritablity point to a diffuse involvement of the vegetative centres. The possibility of tumour is rather negated by the absence of change during more than three years in the results of X-ray, cerebro-spinal fluid and visual field examinations. However, a tumour growing straight upwards into the diencephalon might be missed by these investigations, except that it would be fairly close to the third ventricle and one would accordingly expect to find a raised cerebro-spinal fluid protein level. Phillips and Goswell have shown[5] that tumours close to the ventricles cause a rise in cerebro-spinal fluid protein level, and since there is no change in the protein level in this case, tumour is not considered to be the most likely ætiological factor.

There is one other possibility beside tumour and encephalitis; that is thrombosis. Pituitary vascular thrombosis after delivery is a cause of the well-known Simmond's cachexia. Although there is a suggestive result from the insulin sensitivity test, there is no story of post-partum hæmorrhage or of severe anæmia. Vascular thrombosis, *post partum*, has only twice been recorded as a cause of *diabetes insipidus*, and is mentioned only to indicate that it has been considered. Therefore, although the possibility of an eosinophile adenoma has not been disproved entirely, the most likely cause of the patient's symptoms is an attack of diencephalic encephalitis at the age of seventeen years.

I should also like to mention the variation of the diabetes during the pregnancies. In harmony with the previously published results is the fact that there has been no true regularity in the reaction of daily urinary output to the onset of pregnancy (Figure I).

Indications for Termination of Pregnancy.

This leaves the indications for termination of pregnancy to be discussed. There are no general indications for termination of the pregnancy in *diabetes insipidus*, principally because of the few cases reported; each case must be considered on its own merits. Termination in the present case was advisable because of the progression of weakness, gain in weight and polyuria aggravated by each pregnancy, and because of the fact that, since the patient had two children already, her weakness impaired her ability to care for them. McLaren and McLeod considered that if it was advisable to terminate any pregnancy, sterilization should be performed;[6] but in the present case this has been postponed.

Treatment.

The obstetric treatment has already been discussed. It may be added that if further pregnancies are allowed, they should be carefully controlled with a pituitary oxytocic drug.

The medical treatment of *diabetes insipidus* is by replacement of deficient posterior lobe secretion. There are several methods; the most satisfactory is the intramuscular administration of pitressin tannate in peanut oil. Opinion varies as to the dosage, but at the King George V Hospital for Mothers and Babies, one millilitre was given at 8 p.m. every second night, and this ensured an unbroken night's rest on the first night, for which the patient was very grateful. The urinary output was at least halved during the next two days. Care must be taken to avoid the side effects of water intoxication. They are pallor, faintness, nausea, headache and collapse.

Pitressin controls urinary output in *diabetes insipidus*; but the polydipsia persists to some extent, and the patient may exhibit the above-mentioned symptoms of water intoxication. To prevent this, the water intake should be kept below the urinary output, preferably below three litres per day. Brain and Strauss recommend a smaller dose repeated daily or more frequently. Other methods of administration of pitressin are the parenteral administration of an equeous solution of pitressin, or the insertion of pitressin pledgets into the nostril. Pituitary snuff has an historical value only.

Because the encephalitis was considered as the ætiological factor, and on the advice of Dr. Gilbert Phillips, benzedrine was prescribed (ten milligrammes two or three times a day), with considerable relief of the weakness which has so distressed the patient.

One other possible form of treatment has not yet been mentioned. Experimentally it has been shown that thyreoid hormone is essential for the occurrence of polyuria, and if thyreoidectomy is performed the condition is ameliorated, clinically at least. This suggests a possible mode of attack with the new thio group of drugs; but in view of the patient's weight and general condition, it is not considered advisable at present to approach the problem from this aspect.

Summary.

1. *Diabetes insipidus* has been defined.

2. A short historical review has been given. The condition was discovered by Frank in 1794.

3. The frequency of its occurrence is approximately three times in 50,000 pregnancies.

4. A case history has been given, the features of *diabetes insipidus*, acromegaly and dystocia being stressed. Laboratory investigations gave essentially negative results.

5. A commentary has been given on the mechanism of the syndrome and on the ætiology in the present case, with an attempt to relate the dystocia to deficient posterior lobe secretions.

6. The treatment, obstetric and medical, has been discussed, with emphasis on the termination of pregnancy, and on the use of oily pitressin tannate for polyuria.

Acknowledgements.

I wish to thank Dr. John Chesterman for permission to report the case, and for constructive criticism of the report. My thanks are due also to Dr. Gilbert Phillips for his interest, and to Mr. H. Dent, of Parke, Davis and Company, for the pitressin tannate.

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A SIMPLE GAG FOR TONSILLECTOMY.

By CURZON W. FURNER, F.R.C.S. (Edinburgh),
Newcastle, New South Wales.

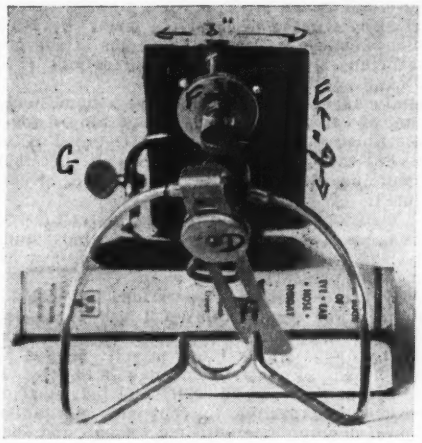
THE attachment to be described in this note could be applied to most gags, but as the most suitable I chose the frame of the Lamrock design. In devising this tonsil gag I had in mind the following desiderata. (i) The tongue depressor should be able to be placed in any position required and should be easily adjustable at any time; in other words, it should be a mechanical substitute for a living assistant, giving a constant, complete exposure in all cases. (ii) The depressor should obey the operator and not the assistant. (iii) The depressor should remain always in the position intended. (iv) No instructions as to its use should be required. (v) The gag should be able to be used in operations under both general and local anæsthesia.

The gag is preeminently suitable for use by operators working at the head of the table, but it can be used by those who work at the side of the patient. I have found that the projection of the mechanical parts is mainly a mental hazard, and one can soon adjust oneself to it. Actually the appliance projects no further, or even less far, than the hand of an assistant holding a tongue depressor, and it always projects in the one place.

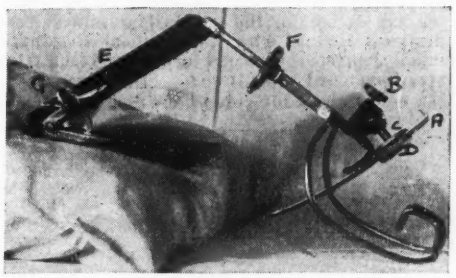
The principle is simple. (i) A sturdy ball and socket joint controlled by one screw permits the variation of rotatory and lateral movements. (ii) A slotted tongue depressor controlled by one nut permits movement in depth, which varies in different patients, the depth concerned being the distance from the tonsillar pillars to the incisor teeth. Of course, variable blades could be used if desired. The tongue depressor is made with a slight curve in accordance with the average longitudinal curvature of the dorsum of the tongue.

When the gag is applied for an operation under local anæsthesia, the tongue depressor is tightened somewhat at the ball and socket joint, and loosened slightly to allow free sliding movement of the depressor. The patient opens his mouth as far as he can, and the gag is adjusted to fit this aperture. The gag is then released slightly to allow the patient about one-quarter of an inch of movement of the jaw, so that he can voluntarily "bite" the gag, or have the feeling of resting his teeth on it. I have found this to be a more comfortable way of lying than with the mouth open with no support. To verify this, one should try lying on one's back with the head extended and voluntarily holding the mouth open; it is fatiguing. One should then try with a mouth gag open just short of the full aperture of one's mouth. It will be found that there is a sense of support and confidence, and considerably less fatigue will be felt. A piece of wet gauze or of thin sponge rubber or soft sheet lead placed over the teeth or gums before the gag is inserted prevents damage to the dental enamel or to the edentulous gums. It has been my frequent experience for the patient under the influence of morphine and hyoscine to go to sleep.

The gag is now opened, the tongue depressor is adjusted to the required length, and the retaining nut is firmly screwed. The next movement is the placing of the depressor in the required position, which is easily accomplished by releasing the ball and socket joint to give free movement. When the tongue depressor is in position, the screw controlling this movement is made tight. The gag is then elevated *in toto* to the suitable extension and without undue



(*a*)



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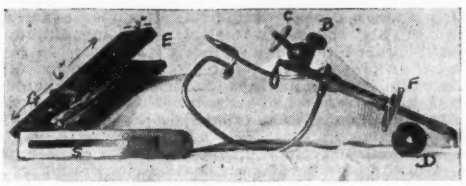

(*c*)

FIGURE I—(*a*), (*b*) and (*c*).
A = tongue depressor with slot S, which is adjustable along C (mobile limb of ball and socket joint); B = ball and socket fixing screw; C = mobile limb of ball and socket joint; D = fixing nut to hold tongue depressor in any position along slot S; E = jack made from two pieces of cedar hinged together; F = adjusting screw of the Lamrock gag; G = adjusting screw of jack made from old gag as used by myself (a piece of wood acting as a wedge between the two arms of the jack is satisfactory).

strain, and the operation proceeds. When one tonsil has been removed, the ball and socket joint is released and the tongue depressor is moved into position on the other side. The smallest variations of position are possible at any stage of the operation quickly and simply.

When the operation is performed under general anæsthesia, the gag can be opened much more freely.

I have found that this type of gag, which uses the teeth as its fulcrum, is less uncomfortable than the Boyle Davis type, which distributes counter-pressure over the tongue and the floor of the mouth. However, this is my experience, and it is open to question. The test is to try each gag in one's own mouth.

A possible fault is that the gag is difficult to retain in the edentulous mouth under general anæsthesia, and sometimes slips when elevated unduly; but after practice this is rarely troublesome, especially if a piece of sponge rubber is attached by stitches to cover the metal curvature of the gag which engages the teeth or alveolus of the lower jaw. This unfortunately is not in the illustrations (Figure I—(*a*), (*b*) and (*c*)).

To attain adequate extension I use a home-made gadget consisting of two pieces of cedar wood hinged together. A triangular block of wood can be interposed between the two to vary the elevation, or a screw ratchet taken from an old gag and adapted to the hinged pieces of cedar (this I now use).

The dimensions are shown in the illustrations.

The gag is very effective in operations under local anæsthesia. No patient, on being asked, has ever complained of its presence on his chest.

The gag can be used for operations on school children and adults. For small children I use a smaller model. The mechanical functions are identical. So far I have only the two gags which I use myself; I have not given the appliances to any instrument makers to copy. However, I am sure that they can be easily and inexpensively made, and anyone who desires to copy the mechanism, if in doubt, may communicate with me. A ball and socket joint as used in a camera tripod (purchased from Harringtons, Proprietary, Limited, Newcastle) is what I adapted.

This appliance retains all the excellent features of the Lamrock gag except for the tongue-depressing mechanism. It is designed for use with intratracheal anæsthesia, and the tongue depressor does not carry an insufflation tube for intrapharyngeal anæsthesia. However, this could easily be added along the side of the depressor if required.

Reviews.

"CORRECTIONAL PSYCHOLOGY."

THE "Handbook of Correctional Psychology", edited by R. M. Lindner and R. V. Seliger, to which some forty-six writers have contributed, deals with that "branch of applied medicine and science which restricts itself to the understanding and treatment of individuals under conditions of detention" with "the implied obligation to rehabilitate those who have proved their social incompetence".[1] A. N. Foxe discusses criminosis and relates various forms of law-breaking to a corresponding stage of fixation in the development of libido, for example, patricide and assault to late oral fixation. Orality and criminosis are discussed also by E. Bergler later in the book. The Rorschach method is given a prominent place in psychometric procedures by M. S. Gurvitz, for its administration to groups is time-saving and satisfactory in all but a few difficult cases. In the same article Dr. Gurvitz refers to "severe cultural deprivation amounting to psychological atrophy" as one of the factors in feeble-mindedness. In the section on "Electroencephalography in Penologic Practice" D. Silverman finds that from 25% to 30% of various types of "psychopathic" criminals have normal electroencephalograms, also 62% of schizophrenic prisoners and 85% of normal controls. In the "Management of the Potential Delinquent", William S. Sadler stresses the lessening influence of the home and of religious authority as a dominant factor in juvenile delinquency together with "defective care, and exposure to the clash of opinions and bewilderment by the endless profusion of views and attitudes", but he also reviews critically the numerous other noxious social influences which merit consideration in the examination of delinquents. Dr. Sadler suggests that money spent on the "preventive education" of adults would pay handsome dividends and refers to work done along these lines by the W. K. Kellogg Foundation in Michigan. The clinical recognition of mental deficiency is handled by Gale Walker from the standpoint of general intellectual and temperamental characteristics and the failure to make an adequate social and economic adjustment rather than from the aspect of psychological measurements. Lowell S. Selling suggests that specially trained prostitutes should be made available for unmarried exhibitionists, but does not state whether some sort of certificate in psychiatry should be awarded to these mental healers, who he admits are not themselves amenable to therapy of their inclination to prostitution. Maximum doses of testosterone (amount not stated) are reported to have been effective in converting pædophilics to more normal sexual behaviour. Prison medicine as a specialty is discussed by E. C. Rinck, who points out that when a penal institution assumes the status of a treatment centre the psychiatrist will be called on to do the greater amount of the work. Unless group psychotherapy can be developed as an effective agent the psychiatrist can handle only a very few cases efficiently. Separate chapters are devoted to ear, nose and throat practice in prisons, acute medical and surgical emergencies, dental care, treatment of venereal disease and malingering. There is no reference to the swallowing of foreign bodies by prisoners. In his contribution on "The Concept of Psychopathic Personality" Oskar Diethelm writes: "It is questionable whether any psychiatrist can devote his life exclusively to the treatment of psychopathic personalities without becoming stale in individual therapy", for the psychopath presents "a brain racking and heart breaking problem". In the following chapter H. Cleckley assumes that every psychiatrist knows what is meant by the term psychopath and accordingly avoids attempting a definition or description, but urges the legal recognition of this class as having limited responsibility and as being entitled to treatment, even though they are uncooperative, lacking in any real insight into their conditions, and without any genuine desire to be other than what they are. G. J. Train ("Rapport in the Penitentiary") discusses some of the difficulties of the psychiatric handling of prison inmates, and writes: "We must regard crime as a symptom complex and recognize that punishment is of doubtful value." It would therefore appear that the psychiatrist after "an honest analysis of his own motives and attributes" must remain antagonistic to the system under which he works, and accordingly be less prepared to effect some part of harmony between the convict and society. L. H. Farber expresses no surprise at the frequency of gastric neuroses, since in his opinion most cases have an obsessional basis and "the average person in present-day Western society may also be described as an obsessional character". He refers to the "sippy" [*sic*] *régime*. In the "Use of Sedative Measures in Mental Hospitals", L. H. Cohen and T. Thale review the special qualities and applications of the usual sedatives, but refer very briefly to the indications for convulsion therapy and frontal leucotomy as sedative agents. However, electroshock is discussed by R. J. Almansi and D. J. Impastato in a later chapter, and they found no appreciable difference in the results obtained from electroshock or insulin therapy in schizophrenics of over six months' duration and only "a slightly higher proportion of recoveries with insulin in acute cases of under six months' duration".

Lauretta Bender contributes a chapter on psychopathic disorders in children, in which she includes a review of her own observations on the effects of institutional life during the first three or five years of life, and concludes that the psychological immaturity exhibited by so many of these children results from emotional deprivations during the early critical years. In the finding of a mean intelligence quotient of 72 due allowance seems hardly to have been made for innate factors in mental subnormality as against post-natal influences, for it is unlikely that the majority of these institutional children come from parents of good intellectual status. A series of children in foster homes, perhaps more carefully selected, showed a much higher intelligence rating. In her summing up of the environmental factors which in her opinion contribute towards emotional infantilism, Dr. Bender writes: "It is as though a newborn infant had urgent needs which must be satisfied." But why "as though"? Dr. Bender stresses a defect in time concept "not hereditary or constitutional", but caused by early emotional and social deprivation, which in her view prevents these children from benefiting from past mistakes, and from motivating their behaviour for future gains. Traffic offenders, according to Lowell S. Selling, should be subjected to psychiatric advice, court supervision, which "makes the offender feel that he has done something which indicates a bad attitude in driving", exhortatory treatment which includes "advice, guidance, or lectures from the

[1] "Handbook of Correctional Psychology", edited by Robert M. Lindner, Ph.D., and Robert V. Seliger, M.D.; 1947. New York: Philosophical Library, Incorporated. 8½" × 5½", pp. 720. Price: $10.00.

bench", correction of bad driving habits by lectures, training posters, and driving in the company of an experienced teacher. "Pentothal" narcoanalysis has gone "beyond the stage of ballyhoo to that of objective valuation", according to George J. Train, who places on record some cases which illustrate the application and effect of this method of therapeutic mental exploration. But older established methods still have their successes, even including improvement in acneiform eruptions. In the last chapter C. P. Oberdorf, "Sidelights on Criminality from Psychoanalytic Practice", applies to criminality in general his own investigation of tendencies in psychoneurotics which would be criminal if allowed expression, while admitting a very meagre acquaintance with actual criminals.

Throughout this work the interpretation of motivation in criminality is almost exclusively psychoanalytic. One contributor, however, points to the need for organized investigation along psychoanalytic lines as a check to the theories which emanate from individual and diverse sources, and suggests that fifty psychoanalytically trained psychiatrists should analyse as a control five hundred criminals of all types in prison over a period of two years.

This book is intended mainly for medical officers of prison services, few of whom have had a special training in psychiatry. Hence psychiatrists will find some of the articles elementary. At the same time the increasing amount of attention which is being given to psychiatry in some prison departments in the United States of America and Great Britain is a lead which must be followed in this Commonwealth in the near future. Whole-time appointments of medical staff will be necessary, since the methods of psychiatric investigation and treatment are still time-consuming. The importance of the adequate handling of the juvenile offender is specially emphasized in this work in which every psychiatrist, whatever his special field, will find something of interest and value.

HUMAN GENETICS.

A most important contribution to the study of heredity in man has been made by Professor Ruggles Gates in his monumental work, "Human Genetics".[1] It is a most exhaustive treatise and for a considerable time is certain to be the standard work of reference on genetics in the English language. Those who are familiar with earlier books written by this author will find the same high scientific standard maintained and extended in this more comprehensive work.

The literary references given at the end of each chapter bear witness to the thoroughness of the work and to the extent of the author's reading. For example, at the end of the chapter dealing with "Abnormalities of the Eye" we find fifteen pages devoted to a list of references to be found in the world's relevant literature. This extension of the field of inquiry into the scientific literature of other countries makes for completeness and certainly brings the work up to date.

"Human Genetics" is essentially a work of reference, of special interest to the eugenist, the anthropologist and the advanced student of human heredity. It also contains a wealth of information which will be useful to all sections of the medical profession, including the oculist, the dermatologist, the hæmatologist and the psychiatrist. Most of us do not pay sufficient attention to the hereditary factor in disease and the possibilities of preventing the development of pathological conditions. Too many medical practitioners think only in terms of environment even when they consider the scope of preventive medicine in its widest sense. This is probably due to the fact that we have concerned ourselves mainly with the cure of disease.

In the chapter on "The Inheritance of Mental Defects" the author quotes figures which show how the percentage of mental defectives in the United States of America has risen, and he makes a significant comment: "This is an alarming rate of increase, and suggests that civilization may yet be swamped by its own defectives unless steps are taken to curtail their increase." Research work in the field of human genetics is especially valuable because it is essential to know more about this complex subject before we can formulate practical schemes to improve the quality of the human race. If we recommend sterilization, segregation and instruction in contraception as eugenic measures in certain cases, our reasons for doing so should have a firm scientific basis.

When such a vast field is covered many readers will find themselves in disagreement with certain passages. That is only to be expected. There is always a tendency for the specialist to over-emphasize the importance of his own point of view, in this case to consider that the hereditary factors are more important than environmental influences. An opposition in Parliament serves a useful purpose because it tends to prevent the government of the day from going to extremes. Similarly one feels that an author would get nearer to the truth if he made frequent contacts with an opposition which would challenge his conclusions and state another point of view.

On the whole Professor Ruggles Gates succeeds in arriving at well-balanced conclusions, but there are notable exceptions. For example, in discussing homosexuality, he fails to mention the Freudian explanation, the one which is generally accepted by psychiatrists. Another example is to be found in the chapter on "The Inheritance of Normal Mental Differences". While there is strong evidence to support the contention that musical and mathematical ability are inherited, it is, to say the least, very debatable whether a sense of humour or left-handedness or a violent temper is inherited through the gene mechanism. It was once popularly believed that tuberculosis affected many members of the same family because it was directly inherited. With greater knowledge we are now better able to assess the relative importance of heredity and environment. Most authorities agree that heredity plays little part in the transmission of tuberculosis. In the study of genetics we should always give due recognition to environmental influences, especially when we consider the ætiology of pathological conditions.

The author brings out well the fact that the same inherited condition may be either dominant, recessive or sex-linked in different pedigrees, all of which shows how complex is the problem of human heredity. These well-produced volumes have a comprehensive index. The whole work is a splendid achievement and would be a valuable addition to the library, not only of the specialist in this field, but to that of any medical practitioner.

[1] "Human Genetics", by Reginald Ruggles Gates, B.Sc. (McGill), Ph.D. (Chicago), M.A., LL.D. (Mt. Allison); 1946. New York: Macmillan and Company, Limited. In two volumes. 9¼" × 6¼". Volume I: pp. 670 with illustrations; Volume II: pp. 784, with illustrations. Price: £5 net (two volumes).

THE PERIPHERAL CIRCULATION.

In a monograph entitled "The Peripheral Circulation in Health and Disease: A Study in Clinical Science", Dr. Robert L. Richards has given an account of the work that he performed under the direction of Professor J. R. Learmonth, the greater part of which was carried out in the Neurovascular Unit at Gogarburn Hospital, Edinburgh.[1] Professor Learmonth informs us in the foreword that "the investigation began in an endeavour to collect physiological information in cases of war injury; but, as so often happens in research, gaps were found in fundamental knowledge".

Dr. Richards commenced his researches towards the end of the first year of the second world war. He hoped to obtain by means of a study of the peripheral circulation in normal subjects information which would be of considerable assistance in the assessment of the viability of limbs after injuries to the main blood vessels. However, he found that the existing knowledge of the normal fluctuations of skin temperature in the limbs of the human subject under varying environmental conditions was insufficient for his purpose. An attempt has been made in the work to remedy the deficiencies. During the course of his studies the author found that two other urgent problems, namely, peripheral vascular disease and injuries of the peripheral nerves, came within the ambit of his investigation.

The monograph comprises eight chapters. After describing the anatomy and physiology of the peripheral vasomotor system, the author then outlines methods of study of this system, both by using clinical observation and by measurement of skin temperature by means of an apparatus consisting of six copper-constantan thermocouples connected in parallel to a sensitive galvanometer. Spontaneous and imposed variations in vasomotor activity are next described. The author found that reflex vasodilatation effected by the "limb immersion method" was a simple as well as a satisfactory method of assessing the dilating capacity of the peripheral cutaneous vessels. In the next three chapters

[1] "The Peripheral Circulation in Health and Disease: A Study in Clinical Science", by Robert L. Richards, M.D., with a foreword by J. R. Learmonth, C.B.E., Ch.M., F.R.C.S.E.; 1946. Edinburgh: E. and S. Livingstone, Limited. 9¼" × 6¼", pp. 165, with many illustrations. Price: 21s.

which are devoted to occlusive vascular disease, the Raynaud phenomenon and peripheral nerve injuries, his observations of this method of reflex vasodilatation are recorded. In the final chapter a description of the clinical features and skin temperature observations found in the immersion foot syndrome is given. This condition results from exposure to cold and is akin to the trench foot of the last war. A summary and an extensive bibliography are appended to each chapter. There are 104 illustrations, most of which are charts showing the result of vasodilatation experiments.

Dr. Richards, who is an ardent disciple of the late Sir Thomas Lewis, concludes his monograph with the following quotation from that master of clinical science: "All knowledge applicable to human disease must owe its inspiration directly or indirectly to intimate contact with disease as it exists in living man." The book, which is excellently produced, should be studied by all practitioners interested in the peripheral circulation.

CHEMISTRY IN ANÆSTHESIA.

GENERALLY considered, Adriani's latest work, "The Chemistry of Anæsthesia", is a very good book.[1] The copy to hand, obviously an English rendering of an American original, sets out with commendable brevity and clarity the enormous range of factors which form the chemical basis of modern anæsthesia. The amount of information it presents is impressive, serving not only to remind us of what we have learned previously, but also to bring us up to date in this fascinating subject.

The book is subdivided into three main parts. The first of these deals with inorganic chemistry in relation to anæsthesia, including a most useful preliminary section on physical considerations, especially as regards the various gases. A valuable examination of the principles and pitfalls of carbon dioxide absorption follows, wherein the superiority of the "to-and-fro" as opposed to the "circle" method of filtration is stressed. Numerous useful diagrams accompany this discussion, and these amply demonstrate the importance of the design and capacity of soda lime containers in relation to their efficiency.

The next part refers extensively to the organic chemistry of anæsthesia. In an admirably progressive fashion it demonstrates the steps by which the many complex drugs now employed have been developed. While much of this information may be of purely academic interest to the clinical anæsthetist, it must remind him of his indebtedness to the organic chemist and drug manufacturer. For those more interested it solves many mysteries and explains, if superficially, the complexities of the various anæsthetic agents. A section on the barbiturates and thiobarbiturates offers an excellent outline of the synthesis and composition of these valuable drugs, so commonly used today.

The final part of the book covers the biochemistry of anæsthesia. The probable modes of action of the anæsthetic drugs are discussed, and the author confirms the currently accepted view that an inactivation of tissue dehydrogenases is their essential property. The effects of anæsthetics on the composition of the body fluids, on renal and hepatic function, and on nervous tissues are then examined. Much correlation of physiological and pharmacological data is evident in these pages. The last chapters give brief summaries of the actions of enzymes and hormones, the significance of vitamins, the metabolic disturbances occasioned by anæsthesia, and the various modes of elimination of the anæsthetic drugs. Finally, the biochemical features of local analgesia are examined.

The work is rounded off with a valuable bibliography and glossary, and there is a complete and accurate index. An appendix contains tables of atomic weights, conversion factors and equivalents. Perhaps irrelevantly, tabular details of the characteristics and antidotes of irritating gases, and of gases used for warfare, are included.

Several crudities of style and composition are evident in the text of this book, but its general excellence more than compensates for these. A few errors were found, and some ambiguity was detected. For instance, it is indicated that the cooling of a gas aids its liquefaction. If, however, a gas is not cooled below its critical temperature no amount of pressure will liquefy it. The pressure required to liquefy a gas at its critical temperature is called its critical pressure. Hence lower pressures than this are required to effect liquefaction if adequate cooling is employed. An assertion that "at a pressure lower than this the gas, no matter how much it is cooled, will not liquefy", seems most contradictory. Discrepancies of this nature recur from time to time, but they are of little significance from the practical standpoint. One remarkable omission is the absence of any mention of the decomposition of trichlorethylene to dichloracetylene, a potent neurotoxin, in the presence of warm soda lime. Another is the complete lack of any reference to curare.

Here and there typographical errors occur, such as on page 225, where Table IX is specified instead of Table X. The structural formulæ of two items included in this table, sandoptal and thioethymal, are incorrect. The formula of cinnamic alcohol, on page 241, is also wrong. A few errors in spelling were found, such as "secreets" on page 371 and the repeated use of "urobilinogin" on page 379. Objection might also be taken to such forms as "operated man" and "high molecular weight aliphatic compounds", adjectival atrocities indeed. In great measure, however, the book gives much satisfaction, so that its author, editors and publishers deserve the highest commendation.

[1] "The Chemistry of Anæsthesia", by John Adriani, M.D.; 1946. Oxford: Blackwell Scientific Publications. 8¼" × 5¼", pp. 540, with illustrations. Price: 35s.

AN AIR FORCE BOOK ON ANATOMY AND PHYSIOLOGY.

A BOOK on the principles of anatomy and physiology is published "for the information and guidance of all concerned by command of the Air Council". It is Air Publication Number 3125.[1] "For all concerned" was a wide field, for it included all interested in the rehabilitation centres of the Royal Air Force. The book is of such exceptional merit that it should be introduced to even wider fields. Most teachers of school physiology or biology, most students of medicine or physiotherapy, most practising physicians would find it of great value. Into its 180 pages are condensed, clearly and concisely, more concerning the fundamentals of the structure and the function of the human body than in many vast tomes. It is evidently the work of a team with vision and a complete grip of their subjects.

In the foreword the Director-General of Medical Services wrote that emphasis is laid on the functional rather than on the theoretical aspect of anatomy. The details of exercises are not described, but their underlying purposes are given. The section dealing with physical fitness and fatigue and the influence of mental stress would be of great value to all those giving instruction to flying pupils. Many of the illustrations are of the muscles of the body. They are clearly drawn, and as a rule the particular muscle is coloured red. This permits a clear conception of the relations and the action of each muscle.

MUSIC IN MEDICINE.

A BOOK has been written by Sidney Licht on the subject of music used as a therapeutic measure.[2] The value of music as an intellectual and somatic form of occupational treatment is dealt with in one chapter, but much of the book consists of a discussion of the emotional and psychological effects of music, particularly on the sick. The book is overfull of quotations, some of which do little to substantiate an undoubted case for making music available to patients in hospital. The author states that a *questionnaire* showed that nearly all of 200 hospitals for psychiatric patients used music as part of their therapeutic programme, and also that there is need for more qualified workers in this field in America. Certainly there is need for discrimination in the selection and method of presentation, as there is a risk that sedation or stimulation which are claimed as some of the therapeutic effects might be produced by bored inattention on the one hand or by hostile irritation on the other. One of the possible responses to music quoted must surely be very common today amongst both the sick and the well: "awareness that sounds are going on, but no further response". However, efforts to encourage the thoughtful use of this powerful influence on mind and body are welcome, though it must also be remembered that, like the most beneficent of drugs, its unintelligent application or abuse may cause toxic effects.

[1] "Principles of Anatomy and Physiology for Physical Training Instructors in the Royal Air Force"; 1946. London: His Majesty's Stationery Office. 9½" × 6", pp. 186, with many illustrations. Price: 7s. 6d.

[2] "Music in Medicine", by Sidney Licht, M.D.; 1946. Boston, Massachusetts: New England Conservatory of Music. 9" × 6", pp. 156. Price: $3.00.

The Medical Journal of Australia

SATURDAY, AUGUST 16, 1947.

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"THE PROBLEM GIRL."

MOST people recognize the existence of a social problem in which the delinquent girl is the central figure. Those who do not know, or who forget, that there is such a problem, have the fact brought home to them every now and again when they read in the newspapers that the girls in a reformatory have "gone on strike" or have staged an open rebellion against discipline. This problem has been the subject of much inquiry and inquiries have been followed by discussions. In most of our communities some official or unofficial attempt is made to deal with delinquent girls; and sometimes to prevent delinquency. What influence inquiry and discussion have on work of this kind would be hard to determine, but he would be a bold person who declared that they had none. No social sore will heal if it is covered up and left to its own devices; in such circumstances it is more likely to spread like a phagedenic process in the human body. Nothing but good can follow exposure and investigation. Even if no specific remedy can be found, no social penicillin with magic qualities, some lessening in extent may be brought about and some side-effects nullified.

The most recent investigation of the problem of the unstable adolescent girl has been made in Great Britain by a joint committee of the British Medical Association and the Magistrates' Association. The report is a short document of thirteen pages; it has been published by the British Medical Association. The committee consisted of twelve members, six from each of the two constituent bodies. Dr. Doris Odlum, honorary senior psychiatrist of the Royal Victoria and West Hants Hospital, Bournemouth, was chairman. Apparently the "problem girl" was not the only subject discussed by the committee, for it is stated that the committee which was set up "to talk over matters of mutual interest" had this serious problem under review for some time in 1946. The girl with whom the investigation was concerned was one between thirteen and seventeen years of age, who comes before the court on a charge of stealing or because she is beyond control, or is in moral danger or in need of care or protection. "Superficially she is a 'good-time girl', living only for her own personal enjoyment, morally and emotionally unstable, perhaps guilty of sexual misbehaviour, and unamenable to discipline and control. Her appearance in Court is followed by an investigation by the probation officer, a stay in a remand home, then perhaps a period in a hostel, and, if that is not successful, she may finally be sent to an approved school, which to her means a sentence of imprisonment." Those who read this description will, if they have been interested in the subject for the last decade or two, recall one of the "Special Report Series" of the Medical Research Council of Great Britain, by Grace W. Pailthorpe, published in 1932. Reference should be made to this document, for it dealt with two series of females and will amplify the general statements made in the present report. The present committee makes a good point when it states that the general attitude towards the girl is often mistaken—the girl's appearance in court is seldom the result of her first misdemeanour. She has probably been guilty of theft, for example, for some considerable time and either she has succeeded in remaining undetected or her victims have taken no action against her. The magistrate has to deal, not with first offenders, but with girls whose undesirable behaviour and standards of conduct may already be well established. It will be remembered that Pailthorpe insisted that in regard to the psychology of criminals, it was necessary to distinguish between sociological and biological interests. The committee in the present instance expresses matters differently. It states that investigation will usually reveal that the girl's misbehaviour is the result of interaction between temperament and environment, but that always at the root there is some defect of character-structure that is the real cause of her difficulty. This is not necessarily a defect of intellect, but rather a degree of social insufficiency. In the League of Nations study on prostitution (see THE MEDICAL JOURNAL OF AUSTRALIA, May 4 and 25, 1940, pages 631 and 732), which was based on reports from twenty countries dealing with the lives of two thousand women, it was found that most women became prostitutes from the cumulative effect of a series of causes in "temperament, upbringing and events". The most powerful predisposing cause lay in the mentality of the individual. In the present instance the joint committee is not inquiring into prostitution, but most of the girls referred to may be looked on as having embarked on a career that has prostitution as one of its final activities. Delinquency has a multiple origin, and we shall all agree that any attempt to deal with it must take cognizance of character defects and other defects in the individual as well as of those in the environment.

The defects are described from two points of view, that of the investigating probation officer and that of the psychiatrist. The probation officer finds that the emotionally unstable girl appears in all walks of life and that "all too often" there is an unfavourable environmental history. Varying home conditions and the absence of home life are described with their effects on the individual, and reference is made to the abrupt change from school life to a life in which a living has to be earned. Readers, especially those in general medical practice who have

had experience of the widely varying conditions surrounding the lives of the men, women and children of the community, will be able to fill in the details for themselves. We read that there has been in recent years, apart from the effects of war, a general slackening of adult moral standards and that the general trend of legislation and propaganda has weakened the sense of parental responsibility. If we grant that this is true, we may still ask whether the proportion of girls who "go astray" today is greater than it was, say, fifty years ago. Adult standards have deteriorated. One result has been that healthy youth has had to set up its own standards. These might not be approved by the older folk of the last generation; it would be more than surprising if they were. These standards on the whole, however, work out quite well and there is reason to advance the view that the verdict of "gone astray" should be based on the standards of today's healthy youth rather than on those of the last generation. This is perhaps rather beside the point of the present discussion, for there are many delinquent girls in present-day society and something more than is being done must be done about them. The joint committee states that the psychiatrist can go more deeply than a probation officer into the cause of a girl's trouble. Naturally. A description of girls with an intelligence quotient of 60 or under is given; most of these girls come from unsatisfactory homes. It is stated that mental defectives in terms of intellectual inferiority are in a minority—most of the unstable girls who come before courts have an intellectual capacity between 70 and 90, the commonest range being between 74 and 88, but an intelligence quotient of 100 may be encountered. It is interesting to recall that Pailthorpe found that the intelligence of 48 out of 100 girls and young women in rescue homes was normal, that the intelligence of 48 was subnormal and that four were mentally deficient. The committee states that the girls with the higher type of intelligence very often come from a broken home, but that on the whole the parents tend to be of a higher mental level than those of the defective girls. These girls may also come from a type of home which is dominated by a very narrow and rigid set of religious values. A special type of girl is described, one who presents a medical problem, and who, if not of too low intelligence and too antisocial in other ways, can be helped by psychological treatment. "She is over-sexual in her behaviour and easily picked up, but is essentially over-ingenuous, over-trusting and over-credulous where admiration from men and what she thinks is romance is concerned. She easily imagines herself in love, but in fact has a less than average capacity for the non-sexual expression of affection and for any permanent love. Her behaviour apart from her sexual behaviour is not usually either social or antisocial, at any rate to begin with. . . . Her intelligence level is not characteristic and may be high or low. . . . She shows in many ways a general emotional immaturity, but this is often masked by the pseudo-sophisticated air lent by her sexuality." We read that every possible effort should be made to persuade such girls to cooperate voluntarily and to undergo residential treatment.

It is when we come to the question of what is to be done for these "problem girls" that we are in deep water. The whole subject is, of course, to a large extent bound up with the need for the general improvement of social conditions, particularly those in which young children have to be reared. There is need, as Professor W. S. Dawson once pointed out, to pay attention to the stages of mental development of a child and to try to determine its emotional state. It is easy to say, as our committee does, that overcrowding, bad housing and malnutrition must be eliminated. This statement is made in connexion with the general remark that in order to deal effectively with these girls there must be a fuller recognition of the general nature and causes of their misbehaviour and of the objects of treatment. There is need also for people to recognize that the "depravity" of youth is to a great extent the result of adult failure. The two other requirements mentioned are (*a*) more facilities and skilled staff for the investigation and treatment of individual cases, and (*b*) more clinics and institutions for the purpose of treatment and control. Under these headings the whole range of social service might be included. Psychiatry and work by psychiatrists take a prominent place in this kind of activity. It is pointed out that the chief difficulty which the psychiatrist has to overcome in helping the girl to build up a suitable series of values is that the life which she has chosen, with its self-indulgence and emotional gratification, is far more attractive to her than anything he can offer. If the girl has so far descended the ladder that she has joined the ranks of the prostitutes, her ascent becomes very difficult. The League of Nations report showed this quite clearly. Prostitutes can rehabilitate themselves, but we are always faced with the "cardinal fact" that rehabilitation can only reduce the supply of prostitutes and not the demand for them. One point in regard to the general problem must be mentioned—it is that "when all has been done that it is possible to do there will inevitably remain some girls for whom all help and treatment seems useless". This fact should be recognized because when psychiatry fails to bring about a cure in these cases, discredit is brought on psychiatrists and their methods. A final general statement remains—when delinquent girls are guilty of antisocial acts the efforts of those in authority should always be directed at reclamation and not at retribution. Something can be done for these girls. Something, we know, is being done in many places in our community. This something can always be made to cover a wider field and to be more effective.

Current Comment.

CAPILLARY HÆMANGIOMATA.

THE port-wine stain or capillary hæmangioma of the face is a relatively common disfigurement for which none of the accepted modes of treatment is wholly satisfactory. An encouraging report has been made recently by Herbert Conway and John P. Docktor[1] on the use of tattooing in the management of the condition. The object of the method is to neutralize the colour of the hæmangioma and not to obliterate the lesion as is usually attempted in other procedures. Examination of microscopic sections of affected areas shows that the vascular channels of the capillary hæmangioma are in the subcutaneous tissue and,

[1] *Surgery, Gynecology and Obstetrics*, April 15, 1947.

to a lesser extent, in the deeper layers of the dermis. The melanin which gives colour to the skin is in the *stratum germanitivum* of the epidermis. The intense red colour of the great numbers of red blood cells in the hæmangioma penetrates to the surface through the normal pigment of the skin, thus giving the effect of dark red to purple. The result of the treatment, as verified by examination of microscopic sections, is to concentrate the injected pigment in the dermis, deep to the normal skin pigment in the *stratum germanitivum* and superficial to the vascular dilatations of the hæmangioma. The basic pigment used by Conway and Docktor was white (titanium or zinc oxide), occasionally mixed with a very small amount of red (mercury sulphide or cinnabar) or green (hydrated chrome oxide). The intradermal injection was made by means of an electromagnetic tattooing device, the needles being inserted into the skin at an angle of approximately sixty degrees, so that the pigment would be injected obliquely at varying depths in the dermis. It is stated that "bleeding may be bothersome", but it is apparently not sufficient to interfere with the practical value of the procedure. The injection causes some discomfort, but not enough to warrant anæsthesia except perhaps in the case of small children. The colour combination required in the individual patient is determined by injecting a small area and observing the effect after four weeks; this procedure is repeated if necessary until the desired effect is obtained. Then treatments may be given at intervals of two weeks until the entire lesion is injected. An area of two to three square inches may be injected in one hour by a skilled technician. The number of treatments depends upon the size of the lesion. Reports are presented by the authors of seven patients treated by this method for capillary hæmangiomata of the face or neck. There were no complications and all the patients, it is stated, were satisfied with the results of treatment. The evidence presented in excellent colour photographs of three patients "before and after" certainly appears to confirm the claims made. Reports on further trial of this procedure will be awaited with interest.

"SORE THROAT."

"SORE THROAT" is among the most common of maladies and, as a rule, its management is essentially clinical. Reference was made in these columns on July 19, 1947, to the persistent evidence that "sore throats" and rheumatic fever are closely associated, and most practitioners treat "sore throat" with respect, though they may not fuss about it. However, because both diagnosis and treatment are usually handled on a clinical basis, it is interesting to note some of the results of a thorough investigation of the condition, including the use of laboratory facilities. Lowell A. Rantz, Wesley W. Spink and Paul J. Boisvert[1] have presented an analysis of the records of 342 patients suffering from "sore throat", of whom 300 were proved to be suffering from an infection with hæmolytic streptococci (all presumably Group A). The disease had a variable course. In the majority of cases the duration of the fever was not greater than three days and the duration of physical signs in throat and neck not greater than four days. A prolonged febrile course was usually associated with the presence of a cutaneous rash, of an unusually severe suppurative process in the throat or of a suppurative complication. Significantly lower temperatures were noted in patients without tender cervical adenitis, but the height of temperature did not reflect the amount of exudate in the throat; the magnitude of the involvement of the pharyngeal tissues was not closely related to the degree and duration of fever. The rapidity of the erythrocyte sedimentation rate was not well correlated with the degree of severity of the clinical condition in the initial stages of the illness, but the rate determined during convalescence appeared to bear a decided relation to the previously observed illness. The initial leucocyte count varied with the severity of the acute disease, but more particularly with the febrile manifestations. The investigators suggest that the lack of close correlation between individual clinical and laboratory observations may be evidence for the existence of two or three different functions or products of the hæmolytic streptococcus, each provoking some feature or group of features of the illness. A rash occurred only when the infecting streptococcus was of type 3, 17, 19 or 30; the disease caused by six serological types specially investigated was otherwise similar. Observations made on therapy were essentially non-productive. Penicillin and sulphadiazine, used singly or in combination, had no apparent effect on the clinical course of the illness. Organisms were isolated from the pharynx and nose of a surprising number of patients in the early stages of convalescence, but the observations were, unfortunately, not extended beyond a period of three weeks. The authors quote the evidence of other investigators that "a large number" of persons after recovery from streptococcal infections remain "pharyngeal and nasal carriers". Chemotherapy apparently has no effect in eradicating these organisms. "Pharyngeal carriers" are less common among those who have had their tonsils removed, but the incidence of "nasal carriers" is not affected. No suggestions are offered by the authors with regard to dealing with this carrier problem.

[1] *Archives of Internal Medicine*, March, 1947.

SPLENOSIS.

THE term "splenosis" was first introduced by J. H. Buchbinder and C. J. Lipkoff[1] in 1939 to describe the condition of "autotransplantation of splenic tissue throughout the abdominal cavity following trauma of the spleen". These authors reported a case and reviewed seven others found in medical literature. All but the two earliest cases (reported in 1896 and 1907) were associated with a history of injury to the splenic region. In Buchbinder and Lipkoff's patient the implants formed nodules which consisted essentially of normal splenic tissue; the authors were satisfied that the nodules were not accessory spleens. No ill-effects appeared to result from the presence of the nodules. G. H. Stobie[2] has now reported the occurrence of numerous nodules of splenic tissue scattered throughout the peritoneal cavity following splenectomy performed for reasons other than trauma. On the basis of a diagnosis of congenital hæmolytic jaundice, a much enlarged spleen had been removed; the operation was difficult because of dense adhesions around the spleen, and very bloody owing to tearing of the capsule. The patient then remained well for about three and a half years, when, accompanying a pregnancy, the icterus and anæmia recurred. Cæsarean section was performed and the splenic nodules were discovered. The patient made a slow but reasonably satisfactory recovery. Stobie considers that the recurrence of the congenital hæmolytic icterus was due to the splenosis. The concomitant inference is that the implants manifested splenic function, a finding not recorded by any previous writer on the subject. The recurrence of primary thrombocytopenic purpura subsequent to splenectomy has been explained as being due to the presence of true accessory spleen nodules and this may well be so. Splenic implants are considered to be quite distinct from true accessory spleens, but it seems a reasonable hypothesis that they may function as splenic tissue. It is not clear why Stobie's patient recovered from her hæmolytic icterus (albeit slowly) after Cæsarean section, despite the fact that most of the splenic nodules were not removed. However, there may be some other explanation for this seeming anomaly, and one cannot lightly dismiss the possibility that the sowing of splenic "seeds" during splenectomy performed for medical reasons may cancel the value of the operation. To obviate this Stobie advocates a surgical technique in which all blood is removed from the peritoneal cavity after splenectomy and the abdominal wall incision is protected from splenic blood to prevent implants.

[1] *Surgery*, December, 1939.
[2] *The Canadian Medical Association Journal*, April, 1947.

Abstracts from Medical Literature.

PÆDIATRICS.

Hæmolytic Disease of the Newborn.

THREE aspects of the problem of *icterus gravis neonatorum* are discussed by Ronald R. Gordon (*Archives of Disease in Childhood*, December, 1946) on the basis of records of 119 patients admitted to the Royal Hospital for Sick Children, Glasgow, between 1934 and 1946. The first is the incidence of abortions and stillbirths in the family history. The incidence of previous abortions in these families was 3·2% of pregnancies, which is certainly not higher than the average abortion rate accepted by Scotch writers. However, the stillbirth rate, that is, the proportion of stillbirths to live births expressed as a percentage, was 6·5%, almost double the official rate for Glasgow. It seems that abortion is not, but stillbirth is, significant in the family history of erythroblastosis. The second aspect is the correlation of serological and clinical findings. Most often the mother is Rh-negative and the child Rh-positive, but occasionally both are Rh-positive. In such cases, if the mother's serum contains antibodies active against the infant's red cells, usually owing to a difference of the A B O grouping, but occasionally to a rare Rh grouping, it may be assumed that this is responsible for the disease. However, three cases are reported in which no such agglutinins could be found, but the infants had jaundice, anæmia, reticulocytosis, splenomegaly, hepatomegaly and biliuria; their subsequent clinical history indicated that, despite the clinical resemblance, they were not in fact suffering from erythroblastosis. In some cases, on the other hand, when the clinical findings are not conclusive, serological evidence may establish the diagnosis. The third aspect is the mortality rate, which in this series, including all cases, was 61·4% before and 32·7% after the introduction of Rh-negative blood. If only children who received one or more transfusions are included, the fall in mortality rate is from 55·7% to 25%. That the mortality rate is still so appreciable is due to the hepatic dysfunction present in the more severe forms of the disease.

Biliary Obstruction in Icterus Gravis Neonatorum.

IT has been known for twenty years that obstructive jaundice may occasionally be seen in *icterus gravis neonatorum*, and Reginald Lightwood and Martin Bodian (*Archives of Disease in Childhood*, December, 1946) discuss the possible causes. They first examine the suggestion that *icterus gravis* is sometimes associated with congenital atresia of the bile ducts. A number of examples of such association have been reported in the past, but a critical review of them shows that, though in several cases the diagnosis of *icterus gravis neonatorum* was strongly suggested, in none could it be accepted without question. The authors further state that, in a series of eight cases of atresia of the bile ducts seen at the Hospital for Sick Children, Great Ormond Street, there was no evidence of Rh iso-immunization, and conclude that though the series is very small, it certainly lends no support to the suggestion that Rh incompatibility is an ætiological factor in congenital atresia of the bile ducts. The authors then report two cases of proven *icterus gravis neonatorum* in which there also occurred jaundice of the obstructive type. The infants recovered and there is no proof of the mechanism of their biliary obstruction. Next is described a child who had no neonatal jaundice, but developed jaundice of an obstructive type at the age of two and a half months. There was no anæmia, but the child's blood was Rh-positive and the mother's Rh-negative with anti-Rh agglutinins (titre 1 in 32). Autopsy revealed pigment stones in the common bile duct and cystic duct, together with much pigment sand. Another infant with neonatal jaundice due to Rh iso-immunization was found to have pigment stones in the gall-bladder when it died at the age of six months. It seems therefore that the formation of pigment thrombi or stones may cause biliary obstruction in *icterus gravis neonatorum*, but the authors present a further cause, namely, hepatic cirrhosis. Three infants are described who suffered from erythroblastosis confirmed serologically; two of them had neonatal jaundice and one a gradually developing anæmia. All three developed obstructive jaundice after a few weeks and died before the age of three months, and in all autopsy revealed liver cirrhosis with intercellular bile thrombi.

The Treatment of Erythroblastosis Fœtalis.

I. A. B. CATHIE (*Archives of Disease in Childhood*, December, 1946) discusses some aspects of the treatment of erythroblastosis. An investigation of the titre of maternal antibodies in the infant's circulation and of the sensitization of the infant's red cells showed a steady fall in both, until neither could be demonstrated four or five weeks after birth. The series of ten babies investigated was too small for final conclusions, but the findings contrast with the fact that hæmolysis does not always cease after maternal antibodies apparently disappear, nor is there a close relationship between severity of erythroblastosis and the level of maternal antibodies. Treatment is by transfusion of Rh-negative blood. The amount given in the initial transfusion can be determined from the formula

$$\frac{\text{desired count} - \text{actual count}}{\text{desired count}} \times \text{blood volume.}$$

The blood volume can be taken as 40 millilitres per pound of body weight. It is not desirable to raise the blood count to five million per cubic millimetre, for at this level hæmolysis is greater; at a lower level, such as four million per cubic millimetre, the anæmia stimulates hæmopoiesis in the bone marrow, which sometimes does not take place if the count is kept in the region of five million by transfusions. The larger transfusions are given at the rate of 15 to 20 millilitres per hour through a cannula tied in a vein, but small transfusions can be given at a rate of 60 to 80 millilitres per hour by means of a small intravenous needle held in a scalp vein. The largest and straightest veins are just above the ear. The author criticizes several methods that have been recommended for treating erythroblastosis. The first is the transfusion of Rh-positive blood with the aim of more rapidly absorbing the antibodies that the fœtus has received from the mother. Experiments are described which show that when these cells are lysed some at least of the antibody is still free to act on further red cells. The suggestion of treatment by exsanguination and transfusion of the erythroblastotic infant is criticized on the grounds that, apart from its difficulties and dangers, much of the maternal antibody is fixed in the infant's tissues and so cannot be removed by exsanguination, and also that the distressing sequelæ of kernicterus and mental defect have probably been determined during intrauterine life. The weaning of erythroblastotic infants is said to be unnecessary, for in a few experiments a high titre of Rh-antibody was drunk, but in no case was it possible subsequently to demonstrate the antibody in the blood.

Pertussis Immunization: Reinforcing Dose at Kindergarten Age.

PEARL KENDRICK (*American Journal of Diseases of Children*, October, 1946) investigated the immune response (opsonocytophagic response) in a group of 187 children of kindergarten age before and after a stimulating dose of 5,000 million organisms in plain pertussis vaccine. All had previously been immunized with plain vaccine, alum-precipitated vaccine or combined diphtheria and pertussis vaccine by three injections at monthly intervals. Tests before the "booster" injection showed a moderately high opsonic response persisting for four years, but this was increased an average of 1·6 times by the "booster" injection.

ORTHOPÆDIC SURGERY.

Ossifications Associated with Chronic Strain of the Tibial Collateral Ligament.

EDMUND W. KLINEFELTER (*The Journal of Bone and Joint Surgery*, January, 1947) considers that chronic strains of the upper half of the tibial collateral ligament, which often occur among football players and skiers, do not result from the usual skating movements, but are produced by such movements as the "split" in figure skating. Subsequent to these strains, ossifications may develop in this part of the ligament. The author considers that since the stress in roller-skating is applied more to the lower half of the ligament, strains resulting in ossifications are more frequent in this portion than in the upper half. In addition, ossifications appear also at the strained tendon attachments of the popliteus and soleus muscles, on the medial aspect of the tibia. The author states that these ossifications frequently produce symptoms and may interfere seriously with the function of the ligament and tendons. He found that strains occurred more often in the obese middle-aged woman. Because, as a rule, she is inexpert and, in order to avoid collisions with other skaters, she is compelled to check her advance frequently, not by the turning and gliding movements characteristic of the younger, better-developed skater, but

by throwing her weight on the inside wheels of the externally rotated skate as it is dragged against the floor; the same leg is practically always used for this purpose. The development of the strain is gradual; the first symptoms rarely appear before at least three years of skating have elapsed. The author considers that it is important to impress on the patient the importance of avoiding the damaging method of preventing collisions. A shorter, slower skating stroke is recommended and the total skating period is limited to not over one hour per week. The author states that, if these recommendations are not observed, bony deposits often begin to appear at the region of the tibial attachments of the tibial collateral ligament and of the popliteus and soleus muscles.

Absorption of Trypan Blue from the Human Knee Joint.

R. L. DE C. H. SAUNDERS *et alii* (*The Journal of Bone and Joint Surgery*, April, 1947) injected trypan blue in saline solution into a knee joint of a young male prior to amputation of a limb for a Ewing's tumour involving the upper third of the femur. The limb was amputated one hour after injection into the knee joint and an injection of dye was made into the ankle joint after amputation. Two hours after injection into the knee joint the joint was opened and it was found that 98·8% of the dye originally injected had been absorbed or fixed. The ankle joint was opened five hours after post-amputation injection and it was found that 12·5% of the dye was free in the joint cavity and that 87·5% had been absorbed or fixed. The author points out that soluble substances passing from the joint cavity to the blood stream must traverse the tissue spaces of the synovial membrane and fluids by diffusion by selective absorption before reaching the blood or lymphatic capillaries. Microscopic examination of the knee joint showed that the dye had stained only lightly the synovial and subsynovial tissues. In general, the synovial cells were devoid of dye granules, but these were visible in the macrophages, the fibroblasts and the monocytes. Microscopic examination of the ankle joint showed that much of the dye remained fixed in the synovial membrane, and both cells and matrix showed intense staining to a depth of two millimetres. The author concludes that trypan blue is absorbed rapidly from the normal living knee joint, mainly by diffusion into the blood and to a much less degree by way of the lymph and by phagocytosis; circulation to the joint is shown to be an important factor.

Treatment of Complications of Old Fractures of the Neck of the Femur by Vitallium-Mould Arthroplasty.

M. N. SMITH-PETERSEN *et alii* (*The Journal of Bone and Joint Surgery*, January, 1947) present the results of vitallium-mould arthroplasty performed in forty-two patients presenting complications of femoral-neck fractures during the past seven and a half years. The authors state that, as applied to the treatment of complications of fractures of the femoral neck, the procedure is varied according to the extent of the degenerative changes; four different types of mould arthroplasty have been performed. When aseptic necrosis of the femoral head is limited in extent and occurs after union of the fractured neck, a routine mould arthroplasty is performed. When aseptic necrosis involves most of the head, even though the fracture has united, a Whitman reconstruction operation with the addition of a viatallium-mould arthroplasty is indicated. If non-union with a dead head and more or less complete absorption of the neck occurs, a "modified Colonna" reconstruction operation with a vitallium-mould arthroplasty is performed. If, because of previous operative procedure, the greater trochanter has become atrophied to permit of a "modified Colonna" operation, the intertrochanteric region may be reconstructed to fit a mould. The authors conclude that 85% of the results were satisfactory to both the patient and the surgeon. They found that there was progressive improvement in function for three to four years after operation; the condition then became stationary. There was no operative mortality. One patient died from septicæmia, following an arthroplasty four months previously. Post-operative complications occurred in thirteen patients, five of whom had been operated upon for aseptic necrosis and eight for non-union. Post-operative sepsis occurred in six patients, in two of whom infection had complicated the original nailing operation. Subluxation of the mould occurred in five patients. In two patients subluxation followed post-operative sepsis; and revision, although unsuccessful in overcoming the subluxation or an occasionally draining sinus, enabled satisfactory function to be regained. Of the other three patients in whom subluxation of the mould had occurred, two had been treated by the "modified Colonna" revision, and the third by a "modified Whitman" procedure. Upward displacement of the greater trochanter, in spite of fixation to the femoral shaft by a three-flanged nail, occurred in one case.

Mobilization of Metacarpo-phalangeal Joints: Arthroplasty and Capsulotomy.

SAMUEL B. FOWLER (*The Journal of Bone and Joint Surgery*, January, 1947) considers that the metacarpo-phalangeal joint of the fingers is probably the most favourable joint in the body for arthroplasty because the joint is primarily concerned with mobility, is not subject to the trauma of weight-bearing and is under complete muscle control in all directions. He found that if there had been a loss of intrinsic muscle substance, it was important to transfer the *flexor digitorum sublimis* tendon into the lateral bands of the extensor aponeurosis. After arthroplasty the joints were found to be stable and relatively frictionless. The author states that ankylosis does not recur following surgery if good muscles are acting directly on the joint and if flexion is maintained for an adequate period. He believes that capsulotomy is indicated on metacarpo-phalangeal joints fixed in extension if the joint surfaces are intact and if they cannot be mobilized with physical therapy and traction. At operation the collateral ligaments are completely excised. If, after complete excision of the collateral ligaments, the joint is flexed and it is found that the joint opens like a book instead of the phalanx gliding around the metacarpal head, then the base of the phalanx is being blocked by an adherent anterior capsule. The adherent anterior capsule is found stripped from the metacarpal head, when the joint is forcibly flexed; if not, it may be reflected from the metacarpal head with a blunt dissecting probe. Following surgery, the metacarpo-phalangeal joints are held in flexion, either by rigid splinting or by traction, for three weeks. The author found that the results from capsulotomy were excellent, and 80° to 90° of motion might be confidently expected, if the local tissues were good and the mechanics of the hand were satisfactory. Factors contributing to imperfect results were: failure to excise adequately the collateral ligament, particularly the anterior portion; failure to strip the anterior capsule from the metacarpal head; failure to keep the joint flexed long enough; subluxation of the extensor tendon; muscle imbalance in the hand; ununited and malunited metacarpal fractures; poor condition of the local tissues, including cicatrix and deficient circulation.

External Rotation of the Leg in Poliomyelitis.

SAMUEL C. YACHNIN (*The Journal of Bone and Joint Surgery*, April, 1947) believes that the deformity of external rotation of the leg develops early in poliomyelitis and can be prevented. He states, after a study of the anatomy and mechanics of the knee joint and its supporting structures, and an analysis of one hundred and twenty-eight patients, that abnormal external rotation of the leg will occur under the following circumstances, and that, in the absence of any one of these, this deformity is not likely to occur: (i) complete paralysis of the internal rotators at the hip (in a few instances slight power was present, rated at "poor minus or 10% muscle"); (ii) no support or incomplete support of the extremity during the first few months of illness, so that the entire lower extremity assumes the position of external rotation for a major portion of the time; (iii) complete or severe paralysis of the muscles at the knee. This included both the flexors and extensors, whose power was not better than "poor or 20% muscle". The author believes that the deformity under discussion is more accurately termed external rotation deformity of the leg than external torsion of the tibia. He states that clinical examination will demonstrate that the entire tibia and fibula are rotated outward, and that the tibial tubercle is definitely displaced laterally in relation to the patella. The rotation takes place through the knee joint, around the axis of the attachment of the anterior cruciate ligament on the superior surface of the tibia. The author considers that when the supporting muscles around the knee are severely weakened or paralysed, laxity of the tibial collateral ligament results. This reduces its action as a checkrein to increased external rotation. The deformity occurs during the early months of the illness, while the patient is still confined to bed. The internal rotators of the hip are severely weakened or paralysed, the unsupported lower extremity thus being allowed to assume the position of external rotation from the hip downward. When this abnormal position is not prevented by whatever mechanical means are at hand, and strict attention is not paid to continued support, the deformity will probably occur.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the South Australian Branch of the British Medical Association was held at the Verco Theatre, at the Institute of Medical and Veterinary Science, Adelaide, on June 25, 1947, DR. L. R. MALLEN, the President, in the chair.

Annual Report of the Council.

In moving the adoption of the annual report of the Council, Dr. H. M. Jay expressed the gratitude of the members for the work that had been done during the previous twelve months. He wished especially to thank Sir Henry Newland and Dr. R. J. Verco for the way in which they had represented the Branch on the Federal Council. He also drew the attention of members to the report regarding the health services of the State and said that the fundamental principle which had been expounded by the Branch over a number of years had been included in the report of the Committee of Inquiry for consolidating the health services of South Australia. Before concluding his remarks, Dr. Jay paid a warm tribute to the late Walter C. Dobbie for his work on behalf of the Branch. This had extended over a long period of years. Dr. J. Stanley Verco endorsed Dr. Jay's remarks and seconded the motion for the adoption of the report. Before he put the motion to the meeting, the President referred to the late Walter C. Dobbie and said that he had been a loyal and valued servant of the Branch, whose work had been helpful not only to the Branch but also to individual members. The motion for the adoption of the report was carried. The report is as follows.

At the annual general meeting held on June 26, 1946, officers and members of the Council were elected as follows:

President: L. R. Mallen.
Vice-President: F. L. Wall.
Honorary Treasurer: P. T. S. Cherry.
Honorary Medical Secretary: R. F. West.
Ordinary Members of Council: J. M. Dwyer, C. E. King, A. D. Lamphee, C. O. F. Rieger.

At the meeting of the Council held on July 4, 1946, the following subcommittees were appointed:

Scientific: G. Brown, B. H. Swift, R. F. West.
Contract Practice and Medical Planning: N. R. Bennett, J. R. Cornish, J. M. Dwyer, L. R. Mallen, C. O. F. Rieger, R. John Verco.
Ethics: G. Brown, P. T. S. Cherry, C. E. King, A. D. Lamphee, B. H. Swift, G. Wien Smith, R. F. West.
Parliamentary Bills and Publicity: P. T. S. Cherry, H. S. Newland, B. H. Swift, R. John Verco, F. L. Wall.
Library: J. M. Dwyer, A. D. Lamphee, H. S. Newland, B. H. Swift, R. F. West.
Rehabilitation and Reestablishment: N. R. Bennett, J. R. Cornish, P. T. S. Cherry, J. M. Dwyer, A. D. Lamphee, H. S. Newland, R. John Verco, F. L. Wall.
Tuberculosis: D. R. W. Cowan, J. L. Hayward, K. S. Hetzel, H. M. Jay, P. S. Messent.

The President, Immediate Past President, Vice-President, Honorary Treasurer and Honorary Medical Secretary are *ex officio* members of all committees.

Monthly Scientific Meetings.

Eight meetings were held during the year up to May 31 and all were well attended. The meeting on May 31 was held at Riverton, and there was a representative gathering of members. An invitation was extended to the wives of members to visit Riverton and arrangements for their entertainment were made by the President and Mrs. Mallen. After the meeting members and wives were entertained at supper. The meeting proved very successful and enjoyable, and the Council desires to express its thanks to the President and Mrs. Mallen for their hospitality.

The Council has arranged for a clinical meeting at the Repatriation General Hospital, Dawes Road, Springbank, on June 12.

The following programme was carried out:

July 16, 1946: Mr. N. Stannus Gunning on "Painful Shoulder", accompanied by moving pictures illustrating the subject.
August 29, 1946: Talks and demonstrations by the Radiological Section of the Branch.
October 31, 1946: Dr. Malcolm Cockburn on "A Plea for the Premature Infant".
November 28, 1946: Mr. A. Britten Jones on "Peripheral Venous Thrombosis: Its Prevention and Treatment".
February 19, 1947: Clinical evening with demonstration of cases at Royal Adelaide Hospital.
March 27, 1947: Clinical evening with demonstration of cases at Adelaide Children's Hospital.
April 24, 1947: Dr. O. M. Moulden on "Treatment of Varicose Veins by High Ligation and Injection with an Analysis of a Series of Cases". A colour film of operative technique was shown.
May 31, 1947: Country meeting at Riverton. Dr. R. F. Matters on "Pelvic Inflammations".

In addition to the above, invitations were given to members to attend the Royal Australasian College of Surgeons' meeting on September 11, 1946, and the Royal Australasian College of Physicians and the Royal Australasian College of Surgeons' meeting on May 1, 1947.

The Council desires to place on record its appreciation and thanks to all those who contributed papers *et cetera* and those who in other ways helped to make the scientific meetings possible during the year.

Membership.

The membership of the Branch is 532, an increase of 13 on the previous year. The number of new members elected was 33, the balance representing deaths and transfers. It is with sincere regret that the Council records the deaths of E. J. Frayne, T. C. Kohler, D. G. Postle and J. E. Porter.

Dr. Bronte Smeaton completed fifty years' membership of the Association during the year.

Representation on Boards.

Medical Board of South Australia: H. H. E. Russell.
Dental Board of South Australia: J. W. Close.
Nurses' Board of South Australia: A. B. Russell.
Metropolitan Infectious Diseases Hospital Board: H. H. E. Russell, G. R. West.
Australian Aerial Medical Services Council: J. M. Dwyer.
Australian Red Cross Medical Services Advisory Committee: H. M. Jay, B. H. Swift, R. John Verco.

ATTENDANCES AT COUNCIL AND COMMITTEE MEETINGS.

	Council.	Parliamentary Bills and Publicity.	Contract Practice.	Ethics.	Library.
BENNETT, N. R.	10	—	1	—	—
BROWN, G.	12	—	—	1	—
CORNISH, J. R.	10	—	2	—	—
CHERRY, P. T. S.	11	1	—	—	—
DWYER, J. M.	12	—	2	—	1
KING, C. E.	2	—	—	—	—
LAMPHEE, A. D.	9	—	—	1	1
MALLEN, L. R.	12	1	1	1	—
NEWLAND, H. S.	10	—	—	—	1
RIEGER, C. O. F.	10	—	2	—	—
SWIFT, B. H.	8	—	—	1	—
SMITH, G. WIEN	12	—	—	—	—
VERCO, R. JOHN	11	1	2	—	—
WALL, F. L.	10	1	1	—	—
WEST, R. F.	10	1	—	1	—
Meetings held up to June 5, 1947	12	1	2	1	1

Federal Council of the British Medical Association in Australia: H. S. Newland, R. John Verco.
Saint John Ambulance Association: H. G. Prest.
Representative of "The Medical Journal of Australia": E. F. Gartrell.
British Medical Hall Company, Limited, Directorate: G. H. Burnell, F. St. J. Poole.
Mothers and Babies' Health Association Council: R. John Verco.
Parliamentary Committee to Inquire into Health Services of South Australia: H. M. Jay.
Central Council of the Association, London: J. H. Anderson.

Sections.

Except in one or two instances, the Sections have not resumed their regular activities which were suspended during the war.

Lodge Practice.

After long negotiation, the Federal Council submitted a final draft of the new model lodge agreement to the Friendly Societies' Association in November last. The aim of the agreement is to provide uniform conditions and fees for lodge practice for all the States. The matter has had the attention of the Council for a considerable period and suggestions were made from time to time which it was considered desirable to embody in the agreement. One important difference between the lodge agreement operating in South Australia and the new model Common Form of Agreement is the provision in the latter that lodge members receiving compensation under the *Workmen's Compensation Act*, or any other compensation act, are not entitled to treatment under the lodge agreement. Whilst the new model lodge agreement differs in some respects from our present agreement, the main principles which have operated in South Australia for many years are included, and the right to adhere to the unit principle in this State is agreed to by the Federal Council. The agreement will be discussed with representatives of the South Australia Friendly Societies' Association at a conference which has been called for June 5, when the question of an increase on the present fees paid to lodge surgeons in South Australia will also be placed before the lodge representatives. It has long been considered that the fees paid are inadequate, and this has been recognized by lodge representatives.

Health Services in South Australia.

With a view to consolidating the health services of the State, a committee of inquiry was appointed by the State Parliament on April 10, 1946. As far back as April, 1935, the Council of the Branch, recognizing that there was a lack of coordination between the various government departments regarding health matters, appointed a special subcommittee to consider the matter, and a report was submitted to the Government recommending that the necessary legislative and administrative steps should be taken to create, under a Minister of Health, a Department of Health in which should be combined all governmental activities for the prevention and treatment of human disease. The report embodied suggestions as to the means by which this could be brought about. A deputation from the Council subsequently waited on the Chief Secretary, and as there appeared to be some misconception as to the recommendations made in the report, the Government was asked to receive a further deputation, but this was not granted, and although further correspondence passed between the Government and the Council, nothing was done in the matter. The Council then decided to publish particulars of the report in the Press. The Parliamentary Committee, referred to above, at whose inquiry members of the Branch gave evidence, has now submitted its report to the Government under date December 4, 1946, and this is now receiving consideration. The Council has also appointed a special subcommittee to consider the recommendations made in the report, many of which follow on the lines suggested by the Council in its report of 1935.

Pharmaceutical Benefits Act.

No finality has been reached in the discussions between the Federal Council and the Federal Government. The Federal Council recently suggested to the Minister of Health in a letter under date March 5, 1946, practical alternatives to the provisions of this act. The more important drugs and preparations in modern medical practice are becoming limited in number; among them are penicillin, the sulphonamides, the sera, insulin and liver extracts. The Federal Council suggest that the Government should confine the benefits of the act to these relatively few and relatively costly important drugs, and that it make them available on the production simply of a doctor's prescription. This course would have certain clear advantages. It would make available important life-saving and disease-preventing drugs free; it would involve a comparatively low cost of administration; it would impose no restriction on the freedom of judgement of the prescribing doctors. So far as the act in its present form is concerned, the Federal Council has reaffirmed its opposition to the objectionable clauses. These are restricting benefits to prescriptions contained in a formulary, the clause which determines the constitution of the formulary committee and the clause providing for penalties on practising doctors. The Minister, after receiving the above letter, met representatives of the Federal Council on April 21 last, and the matter is still under consideration.

Visit of Dr. J. G. Hunter.

The General Secretary of the Federal Council of the British Medical Association in Australia, who was passing through Adelaide on his return from London, where he attended the Annual Representative Meeting of the Parent Association, was invited by the Council to address members on "Medical Services in Great Britain: Points of View of the Medical Profession and the Government". The meeting was held on Thursday, November 14, 1946, and 164 members were present. Members of the Federal Council who were holding their meeting in Adelaide were also present. Dr. Hunter gave points of comparison between existing conditions in Australia in regard to medical services, and those proposed under the act in Great Britain, particularly in respect of hospital services, and gave information in regard to postgraduate facilities in Great Britain. At the close of his address several questions were put to Dr. Hunter. The following members of the Federal Council also addressed the meeting: Dr. H. R. Grieve (New South Wales), Dr. A. E. Lee (Queensland) and Dr. F. W. Carter (Western Australia). Dr. Frank S. Hone proposed and Dr. Swift seconded a vote of thanks to Dr. Hunter.

The President (Dr. Mallen), in thanking Dr. Hunter, expressed appreciation of the information he had placed before members, and thanked the three Federal Council members who had addressed the meeting.

Proposed National Medical Service.

Throughout the year correspondence has passed between the Federal Council and the Federal Government in regard to the proposed national medical service. The Federal Council has placed before the Government its views and suggestions, and is now waiting definite information from the Government regarding the matter.

Informal Talks with the Chief Secretary.

The Chief Secretary (the Honourable A. L. McEwin), who desires to cooperate with the Association regarding matters of health, suggested that instead of contacting him at odd times, representatives of the Association should meet him regularly and place before him the views of the Branch regarding matters of health. The Council readily accepted the suggestion, and the President, Dr. B. H. Swift, and the Lay Secretary meet Mr. McEwin at his office each month. These informal talks are proving helpful when matters affecting health are before the Council, and the views of the Government known.

Commonwealth Government Hospital Policy.

The position in regard to this matter has not yet been clarified, and the honorary staffs of the Royal Adelaide and Adelaide Children's Hospital are still carrying on in an honorary capacity for the present.

Proposed Hospital in the Western District.

Through the courtesy of the Honourable Chief Secretary, the plans of the hospital were made available to the Council. A special subcommittee was appointed to consider them and make any suggestions thought desirable. As a result of recommendations made, the original plan for the maternity section was altered and a new plan was submitted and approved. It is understood that the hospital will provide for intermediate, private and indigent patients. The whole scheme has been submitted to the Parliamentary Public Works Committee, who are taking evidence, and representatives of the Council were invited by the committee to give evidence. The Government is anxious to proceed with the erection of the hospital, but has to await the report of the committee before any further action is taken.

Representation of Branches on the Federal Council.

The constitution of the Federal Council has been altered in regard to the representation of the Branches, and now consists of the following delegates: New South Wales, 4;

Victoria, 3; South Australia, 2; Queensland, 2; Tasmania, 2; Western Australia, 2.

Sir Henry Newland.

At the annual general meeting at which there was a large gathering, held on June 26, 1946, a presentation was made to Sir Henry Newland by the Branch in recognition of his outstanding work on behalf of the Branch and the medical profession throughout Australia. The presentation took the form of a portrait of Sir Henry painted by Max Meldrum, of Melbourne, and a silver salver. Reference to the work of Sir Henry over a long period of years was made by the several speakers, after which the President, Dr. B. H. Swift, unveiled the portrait and presented the salver. In replying, Sir Henry said that he was deeply impressed with the gifts which members had bestowed upon him. He would still continue to serve the interest of members generally throughout Australia so long as he was able.

Medical Services of the Repatriation Commission.

The committee visited Adelaide on August 5 to 7 last and the following were asked by the Council to give evidence before the committee: Dr. F. L. Wall, Dr. N. R. Bennett, Dr. K. D. McKenzie, Dr. F. Ray Hone, Dr. R. L. Thorold Grant.

Permanent Tuberculosis Subcommittee.

At a meeting held on August 16, 1946, the committee recommended that there was no valid objection to the treatment of ex-service and civilian tubercular sufferers in the same institution and there would be definite advantages on so doing in this State. The Council agreed with the principle contained and the recommendation of the committee, but it should not in any way involve interference with the Red Cross Hospital Scheme, and not implemented until the time was opportune.

Commonwealth Health Department and other Bodies Regarding Salaries Offered.

The Council has, through the Federal Council, taken up the question of salaries offered for various positions which are considered inadequate. The inadequate salaries offered in advertisements for positions with local bodies has also been brought under the notice of those concerned by the Council during the year.

Australasian Medical Publishing Company, Limited.

The directors of the company have decided to reduce the *per capita* payment for the journal from £1 to 12s. 6d. *per annum*. In view of the necessity to provide additional space for machinery it was suggested that in order to finance this expenditure, the branches should for five years continue to pay £1 per member, 12s. 6d. of which to be in payment for the journal, and the balance of 7s. 6d. to be advanced in return for debentures towards a building fund, to be at the disposal of the directors of the company. The debentures would be the property of the branches and would carry interest at 3½%. This offer has been accepted by the Council of this Branch.

Honours to Members of the Branch.

The Council tenders its congratulations to the following members on the honour conferred on them:

C.M.G.: A. R. Southwood.

O.B.E.: Lieutenant-Colonel C. B. Sangster.

Commissioner of Saint John Ambulance Brigade, Overseas, South Australian District: Dr. E. A. H. Russell.

Priory Commissioner of the Priory of the Australian Commonwealth: Major-General S. R. Burston.

Mentioned in Dispatches for Distinguished Service: Brigadier M. Salter, Lieutenant-Colonel J. M. Bonnin, Lieutenant-Colonel D. W. Brummitt, Lieutenant-Colonel S. J. Douglas, Lieutenant-Colonel W. M. Irwin, Lieutenant-Colonel A. H. Lendon, Major R. H. Hamilton, Captain J. H. Nicholls. For services rendered whilst a prisoner of war: Major A. F. Hobbs.

The above report is a brief summary only and represents some of the activities of the Council during the year. Many other matters have engaged its attention. During the coming year important matters involving the interests of the medical profession will claim the attention of members of the Branch, and only by loyal cooperation and assistance of members will satisfactory results be obtained, and I am confident that this will be given.

I desire to express my appreciation for the assistance and cooperation given to me during my year of office as President of the Branch. Our thanks are also due to the Lay Secretary and the Assistant Secretary, who have identified themselves enthusiastically with the work of the Branch throughout the year.

The Branch suffered a severe blow when, on May 7, the Lay Secretary (Mr. Walter C. Dobbie) died suddenly. Mr. Dobbie was our secretary for the past twenty years, and has been a most loyal servant, always having the interest of the profession at heart and doing everything possible to further its ideals. To his family we tender our most sincere sympathy.

(Signed) L. R. MALLEN, President.

Financial Statement.

The financial statement was adopted on the motion of Dr. P. D. S. Cherry and seconded by Dr. G. H. Burnell. The financial statements are published herewith.

Installation of President.

Dr. F. L. Wall, the sole nominee, was inducted to the office of President and invested with the President's badge of office. Dr. Wall thanked the members for his election.

Election of Office-Bearers.

The following office-bearers were elected for the ensuing twelve months.

Vice-President: Dr. A. D. Lamphee.
Honorary Treasurer: Dr. P. T. S. Cherry.
Honorary Medical Secretary: Dr. R. F. West.
Members of Council: Dr. G. L. Bennett (country member), Dr. J. S. Douglas, Dr. L. L. Davey, Dr. J. E. Hughes.

Messrs. Meucke, Pickering and Mitton were elected auditors for the ensuing year.

Votes of Thanks.

On the motion of Dr. John Mayo, seconded by Dr. M. Erichsen, a vote of thanks was accorded to the retiring members of council, Dr. G. Brown, Dr. N. R. Bennett, Dr. R. Cornish and Dr. G. Wien Smith.

Retiring President's Address.

Dr. L. R. Mallen read his retiring President's address (see page 197). Dr. Mallen was thanked for his address on the motion of Dr. E. F. Gartrell, seconded by Dr. E. F. West.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION, INCORPORATED.

Income and Expenditure Account for the Year ended December 31, 1946.

	£ s. d.	£ s. d.
To British Medical Association, London	672 15 3	
„ THE MEDICAL JOURNAL OF AUSTRALIA	455 12 9	
		1,128 8 0
„ Amount written off Subscriptions		17 0 0
„ Library Subscriptions		101 15 0
„ Federal Council Capitation Fee		253 0 0
„ Postages and Telegrams		111 18 1
„ Stationery and Printing		87 5 7
„ Telephone		35 8 5
„ Rent		25 12 6
„ Salaries		899 10 0
„ Depreciation		8 0 0
„ General Expenses		131 18 11
„ Surplus Income over Expenditure transferred to General Fund		182 0 9
		£2,981 17 3

	£ s. d.	£ s. d.
By Subscriptions—		
City	2,310 19 11	
Country	574 18 3	
Accrued	60 11 0	
Sundry	4 0 0	
		2,950 9 2
„ Interest		27 11 10
„ Medical Certificate Books		3 16 3
		£2,981 17 3

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION, INCORPORATED.

Library Fund Account, December 31, 1946.

	£ s. d.		£ s. d.
To University	150 0 0	By Balance brought down at December 31, 1945	14 12 2
„ Depreciation	4 0 0	„ Interest	2 15 2
		„ Library Subscriptions	101 15 0
		„ Balance	34 17 8
	£154 0 0		£154 0 0

General Fund Account, December 31, 1946.

	£ s. d.		£ s. d.
To Amount written off	7 11 1	By Balance brought down December 31, 1946	3,024 5 9
„ Balance	3,265 6 11	„ Credits written off	66 11 6
		„ Surplus Income over Expenditure	182 0 9
	£3,272 18 0		£3,272 18 0

Balance Sheet as at December 31, 1946.

LIABILITIES.	£ s. d.	£ s. d.	ASSETS.	£ s. d.	£ s. d.
To Sundry Creditors—			By Plant and Fittings as at December 31, 1945	42 0 0	
General	104 18 11		„ Additions	10 7 0	
British Medical Association, London	24 4 0			52 7 0	
THE MEDICAL JOURNAL OF AUSTRALIA	16 10 6		*Less* Depreciation	5 0 0	
		145 13 5			47 7 0
„ National Bank of Australasia		19 18 9	„ Library Account—		
„ Lister Oration Fund, invested in Savings Bank as *per contra*		66 17 4	Delineascope, *less* depreciation	6 0 0	
„ Sundry Subscriptions paid in advance		3 1 0	Projector, *less* depreciation	9 0 0	
„ British Medical Hall Company, Limited, Dividend Account, invested in Savings Bank as *per contra*		447 15 7			15 0 0
„ General Fund Account—			Lister Medals and Dies		3 0 0
Balance December 31, 1945	3,024 5 9		British Medical Hall Company, Limited, Share Account, 288 Shares at £10		2,880 0 0
Less Amounts written off	7 11 1		„ Stocks on Hand—		
	3,016 14 8		Medical Certificate Books	20 10 0	
Add Credits from previous years written off	66 11 6		Stationery	60 0 0	
					80 10 0
„ Surplus Income over Expenditure for year	182 0 9		„ Subscriptions in arrear		71 5 0
		3,265 6 11	„ Sundry Debtors, General		41 1 1
			„ Library Account		34 17 8
			„ British Medical Hall Company, Limited		53 14 5
			„ Special Accounts—		
			Savings Bank of South Australia:		
			Lister Fund	65 12 7	
			Library Account	0 6 4	
			Building Fund	447 15 7	
					513 14 6
			„ Cash—		
			Savings Bank of South Australia	100 2 2	
			Commonwealth Savings Bank	100 5 11	
			In Hand	7 15 3	
					208 3 4
	£3,948 13 0				£3,948 13 0

F. C. W. DOBBIE, Secretary. PERCIVAL T. S. CHERRY, Honorary Treasurer

AUDITORS' REPORT.

We hereby report that we have examined the books and accounts, as produced to us, of the South Australian Branch of the British Medical Association Incorporated for the year ended December 31, 1946. In our opinion the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the affairs of the Branch as at the above date, according to the best of our information, the explanations given us, and as shown by the books produced.

Adelaide,
March 1, 1947.

MUECKE, PICKERING AND MITTON,
Chartered Accountants (Australia), Auditors.

University Intelligence.

THE UNIVERSITY OF MELBOURNE.

THE following information is taken from the *University Gazette* of the University of Melbourne for July 23, 1947.

Dr. B. J. Grieve has resigned from a senior lectureship in botany to take up a position this month as Lecturer-in-Charge of the Botany Department, University of Western Australia, Perth.

At its July meeting the Council appointed Dr. F. H. Shaw Associate Professor of Pharmacology. Frank Herbert Shaw was a student of the late Professor Young and graduated M.Sc. in biochemistry in 1934. After several years as research assistant he went in 1936 to University College, London, where he became interested in experimental pharmacology; for a thesis on chemical estimation of adrenaline and acetylcholine he was awarded his Ph.D. in 1938.

On his return to Australia Dr. Shaw was appointed to the first lectureship in an Australian university in pharmacology, under Professor Wright, and during the war years he was occupied with the vital work of standardizing and testing of drugs such as digitalis, ergot, the arsenicals and sulphaguanidine, which as a result of the interruption of overseas supplies had for the first time to be produced in this country.

Since his appointment as senior lecturer in 1944 he has been engaged in analysing Australian flora for alkaloids which might be of use for medicinal or commercial purposes. His published works include papers on the mode of action of drugs in the human body, for which he has established an international reputation.

Dr. Shaw, who is thirty-seven years of age, is a David Syme Research Prize winner, having shared the award in 1945 with Dr. J. S. Anderson.

The University of British Columbia, Vancouver, has conferred the degree of Doctor of Laws *honoris causa* on Professor Bernard Heinze, following his visit to Canada as a guest conductor at the invitation of the Canadian Broadcasting Corporation.

The Grimwade Prize in Industrial Chemistry has been awarded this year to Mr. J. N. Gregory. Mr. Gregory was engaged during the war years with the Lubricants and Bearing (now Tribophysics) Section of the Council for Scientific and Industrial Research, and his research included work on problems connected with flame throwers.

Dr. H. E. Albiston has been nominated as representative on a committee to investigate and report on the best means of providing an adequate supply of veterinary surgeons for the State's departmental service and to act as veterinary practitioners in country districts.

Professor Wright has been nominated as a member of the Sponsoring Committee of the Melbourne Permanent Post-Graduate Committee to assist in the placing of the medical graduates on post-graduate courses abroad.

Leave of absence has been granted to Dr. W. E. King from his position of lecturer in pathology to dental students for fifteen months, and Dr. C. de Gruchy has been appointed to act in his place.

The following appointments have recently been made by the University Council:

Dr. J. E. Clarke appointed Stewart Scholar in Medicine; Mrs. A. Cahn appointed Lecturer in Applied Dietetics and Food Preparation.

Dr. J. C. Bower, recently appointed Senior Lecturer in Physics, has arrived from London and taken up his duties at the university. Dr. Bower has been employed in the British Ministry of Supply and is an 1851 Scholar from this university.

Mr. P. Lafitte, the newly appointed Senior Lecturer in Industrial Psychology, has arrived from England and taken up his work at the university.

Mr. A. N. Hambly, M.Sc., who is at present head of the Chemistry Department of the Melbourne Technical College, has been appointed Senior Lecturer in General Chemistry, to replace Dr. J. S. Anderson, who will shortly leave to take up an English appointment. Mr. Hambly, who won the Dixson Scholarship at the M.Sc. examination in 1932, was a lecturer in the university before he joined the Technical College staff in 1937.

Post-Graduate Work.

NOTICE TO GRADUATES PROCEEDING TO THE UNITED KINGDOM FOR FURTHER STUDY.

THE following notice has been received from the Post-Graduate Committee in Medicine, University of Adelaide.

At a recent meeting of representatives of all Australian Post-Graduate Committees, it was agreed to adopt a uniform method of sponsoring graduates who wish to proceed to the United Kingdom to work for higher degrees. The sponsoring body in each State consists of representatives of the Royal Australasian College of Physicians, Royal Australasian College of Surgeons, Faculty of Medicine, and the Post-Graduate Committee in Medicine.

The object of the Sponsoring Committee of the Post-Graduate Committee in Medicine is to assist suitable graduates to obtain entry into post-graduate classes in the United Kingdom. Information will be forwarded to the Federation of Post-Graduate Medicine in London, and this body will endeavour to place each student in the class he wishes to attend.

Further information may be obtained from the secretaries of the post-graduate committees in the several States.

THE ROYAL AUSTRALASIAN COLLEGE OF SURGEONS.

POST-GRADUATE AFTERNOONS AT PRINCE HENRY'S HOSPITAL, MELBOURNE.

UNDER the auspices of the Royal Australasian College of Surgeons, each Friday afternoon during September, October and November, 1947, will be devoted to post-graduate education in surgery at Prince Henry's Hospital, Melbourne. All graduates are eligible to attend, and those desiring to do so must register with the Secretary, Royal Australasian College of Surgeons, Spring Street, Melbourne. At 2 p.m. on each Friday a demonstration of pathological specimens will be given by Dr. J. D. Hicks, Director of Pathology at Prince Henry's Hospital. The following syllabus of lectures and operative demonstrations, beginning at 2.30 p.m., has been arranged:

September 5: "The Surgery of the Gall-Bladder and Biliary Ducts", Dr. Victor Hurley.
September 12: "The Surgery of the Gall-Bladder and Biliary Ducts", Dr. Victor Hurley.
September 19: "Surgery of the Thyreoid", Dr. Victor Hurley.
September 26: "Surgery of the Thyreoid", Dr. Victor Hurley.
October 3: "Treatment of Hæmorrhoids", Dr. T. O. Sayle.
October 10: "Tumours of Breast", Dr. A. J. W. Ahern.
October 17: "Prostatectomy and Prostatic Resection", Dr. W. B. Wishart.
October 24: "Femoral Hernia", Dr. G. W. Ashton.
October 31: "Ureteric Calculus", Dr. F. D. Burke.
November 7: "The Surgery of Genital Prolapse", Dr. Robert Fowler. "Diagnosis of Scrotal Swellings", Dr. G. Newman Morris.
November 14: "The Surgery of Genital Prolapse", Dr. Robert Fowler. "Fractures of the Elbow Region", Dr. Bryan Keon-Cohen.
November 21: "The Surgery of Gynæcological Cancer", Dr. Robert Fowler. "Management of Spinal Injuries", Dr. D. R. Leslie.
November 28: "The Surgery of Gynæcological Cancer", Dr. Robert Fowler. "Routine Management of Head Injuries", Dr. D. Donald.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

ANNUAL GENERAL COURSE.

THE Post-Graduate Committee in Medicine in the University of Sydney announces the following fixtures in connexion with the annual general course.

Film Programme.—The following medical films will be shown in the Stawell Hall, 145, Macquarie Street, Sydney, on Wednesday, August 20, 1947, at 4.30 p.m.: "Nitrous Oxide-Oxygen-Ether Anæsthesia", "Handling and Care of the Patient". All medical practitioners are invited to be present.

Lecture.—Dr. C. B. Heald, C.B.E., F.R.C.P., will give a lecture entitled "Arthritis and Ex-Service Personnel" on Wednesday, August 27, 1947, at 4.15 o'clock p.m., in the Stawell Hall. Dr. Heald will give an account of the work of the British Legion Unit of Rheumatology, and his lecture will be illustrated by examples of the films taken during the progress of the work. Dr. Heald, who is a well-known authority on rheumatic diseases, is passing through Australia on his way to New Zealand at the invitation of the Government of that country.

Both these sessions form part of the annual general course conducted by the Post-Graduate Committee in Medicine. Details may be obtained on application to the Course Secretary, 131, Macquarie Street, Sydney. Telephones: BW 7483, B 4606.

THE MELBOURNE PERMANENT POST-GRADUATE COMMITTEE.

PROGRAMME FOR SEPTEMBER.

THE Melbourne Permanent Post-Graduate Committee announces the following programme for September, 1947.

For General Practitioners.

Course in Gastro-Intestinal Disorders.—On September 2 Dr. Ian Wood, assisted by Dr. J. W. Perry, and on September 9 Mr. Julian Smith will continue the course commenced in August, at 4.30 p.m. in the Medical Society Hall, Albert Street, East Melbourne.

Intensive Refresher Course.—From September 22 to October 4 general refresher classes will be conducted at the Royal Melbourne, Alfred, Saint Vincent's, Children's, Women's, Eye and Ear, Royal Park and Fairfield Hospitals and at the Medical Society Hall. Morning sessions will commence at 10 o'clock a.m. and afternoon sessions at 2 o'clock p.m. The fee for the course is £10 10s. Attention is drawn to other demonstrations arranged for early October, which may be of interest to those attending this course.

Country Course.

Geelong.—At 8.15 p.m. on Wednesday, September 17, Dr. C. H. Fitts will demonstrate at the Geelong Hospital on "Some Problems of Pain with Special Reference to the Chest". Dr. D. A. Kidd, 216, High Street, Belmont, Geelong 2857, will make enrolments.

For Candidates for Higher Degrees and Diplomas.

M.D. II M.R.A.C.P. demonstrations will be given as follows:

September 4: "Principles of Prognosis in Heart Disease", Dr. C. H. Fitts.

September 11: "Management of the Anæmias", Dr. T. E. Lowe.

September 18: "Disorders of the Ductless Glands", Dr. K. D. Fairley.

The diagnostic radiology course for D.D.R. II will be continued.

Enrolments for courses should be made at least two weeks before their commencement with the Secretary of the Committee, College of Surgeons, Spring Street, C.1 (JM 1547).

LECTURES IN MELBOURNE.

The Melbourne Permanent Post-Graduate Committee announces that Professor R. W. Gerard, Ph.D., M.D., Professor of Physiology of the University of Chicago, will give lectures to professional audiences in Melbourne at 8 p.m. in the College of Surgeons Lecture Theatre, Spring Street, C.1, as follows:

Wednesday, October 1: "The Mechanism of Action of Nerves."

Wednesday, October 8: "The Present Notions of Synaptic Action."

Professor Gerard's lecturing tour has been arranged by the Australian National University. There will be no charge for attendance and all members of the medical profession are invited. Local arrangements for these two lectures are in the hands of the Melbourne Permanent Post-Graduate Committee, College of Surgeons, Spring Street, Melbourne (JM 1547-8).

Obituary.

FRANCIS CLEMENTS CROSSLÉ.

WE are indebted to Professor A. N. Burkitt, of the Department of Anatomy, University of Sydney, for the following account of the career of the late Dr. Francis Clements Crosslé.

Francis Crosslé died suddenly at his home in Bellevue Hill, New South Wales, early on Saturday morning, July 12, 1947. His death was due to coronary occlusion.

Thus ends for the writer a friendship begun thirty-five years ago, when as a young doctor Crosslé came to Goulburn about 1912 to do a "locum" for the late Dr. W. A. H. Burkitt.

He was born in Dublin on October 24, 1888, being the youngest son of Dr. Francis C. Crosslé, who practised at Newry, near Armagh. Francis was educated at Portora school, where he was interested in rowing and football. He studied medicine at Trinity College, Dublin, from about 1907 to 1911, gaining first-class honours in anatomy, medicine and gynæcology; he also studied at the Rotunda, and was a resident medical officer at the City of Dublin Hospital after graduation.

During his student days he was corresponding secretary of the old and famous student society, the Dublin University Biological Association. This position led to contact with many of the leading medical men of the day both in Ireland and England, who lectured to the society, men such as Halliburton *et cetera*. At this time, too, he became interested in literature, art and the stage, the Abbey Theatre then being at its height; he was, I believe, a friend of Yeats and Gogarty.

Soon after graduation he came to Australia, and after doing various "locums" at Goulburn, Raymond Terrace *et cetera*, he settled in Wilcannia where he was honorary medical officer to the Wilcannia District Hospital from 1913 to 1915.

He then came to Bulli, and was honorary medical officer to the Bulli District Hospital and the Illawarra Cottage Hospital from 1916 and 1917 respectively till 1938. About 1936 he commenced practice one day a week in Sydney, and finally selling out at Bulli in 1939, he took up consulting general practice in Macquarie Street.

During the war he worked for the army, examining recruits and on assessment boards at Victoria Barracks for two afternoons a week from about 1941 to 1945.

He also served the Eastern Suburbs Hospital from 1942 onwards, but I shall conclude this account by quoting from his colleagues there.

After his death his widow was presented with the Free French Forces war service medal by M. Miller, the delegate in Australia of the Free French Ex-servicemen's Association, as a token of gratitude for his services to the Free French Forces during the war.

Crosslé was a keen fisherman, and one of his few relaxations was a few days' fishing on the south coast of New South Wales. He leaves a wife and two children, a boy and a girl, all of whom were devoted to him.

Such is the bare factual record of an unusually gifted man.

Francis Crosslé was that *rara avis*, a gifted all-round general practitioner; further, he was a general surgeon of no mean ability, as well as being a gynæcologist and obstetrician of wide experience. He was very thorough in his clinical examination of his patients, besides possessing great clinical acumen. In these days of specialization there is increasing demand for men of Crosslé's type, and they are unfortunately becoming all too rare. In addition, as one journalist so aptly expressed it, he was a great humanitarian, and helped and gave advice to an astounding number of people, never sparing himself.

Turning to the other side of his life, he was very widely read, and himself the author of a novel, "Donna Juanna", and at one time had hopes of publishing further work. Further, he was most generous to his friends with his books, and many people owe him a debt in this direction. He spoke and read French fluently. He loved beauty and music, and besides acquiring many beautiful paintings and sculptures, he was the friend and physician of many artists who will mourn his loss, including such men as Norman Lindsay, the late Elioth Gruner, Arthur Murch and many others. Those who knew him at Bulli will never forget the beauty and happy atmosphere of his home and garden there. Neither should I forget his kindliness and thoughtfulness, nor the charm of his voice and diction with its trace of Dublin accent, nor his humour, often shrewd and penetrating, but always kindly.

As a fitting conclusion, the following letter comes from his colleague at the Eastern Suburbs Hospital, Dr. F. G. N. Stephens, who read the verses from St. Luke with such moving sincerity and sympathy at the funeral service at St. Michael's Church of England, Vaucluse, on Monday, July 14.

> It was with a very marked sense of loss both institutional and personal that the Eastern Suburbs Hospital heard of the sudden death of Dr. Francis Clements Crosslé at his home on Saturday, the 12th of July.
>
> He had been a member of the surgical staff since 1942 and had carried on his duties with punctilious care right up to the time of his decease. In these years he had shown a high degree of skill both as a diagnostician and as a surgeon, together with a thoughtfulness for the welfare of both the patients and the hospital staff which was always a matter of comment by those who worked with him. His gentleness and courtesy will long be remembered, and it was as a token of affection and esteem that the parable of "The Good Samaritan" (Luke 10, v, 25-37) was read at his funeral service, for we all felt that in his life he had very truly shown the qualities therein described.

ALMROTH WRIGHT.

WE are indebted to Dr. A. H. Tebbutt for the following tribute to the late Sir Almroth Wright.

After a long and colourful life this distinguished veteran of many controversies died recently at his home in Buckinghamshire at the age of eighty-five. It is of some interest to Australians that his many appointments and itineraries included three years in the then young medical school of the University of Sydney as a demonstrator in physiology. He was brought out by Anderson Stuart in 1889 and returned to England in 1892. Curiously enough, in the light of his subsequent career, he appears not to have stirred a ripple in medical circles in Sydney, if the absence of his name in the index of the *Australasian Medical Gazette* for those years is a reliable guide. There will be few alive today who can remember him when in Sydney.

Born in 1861, he graduated in medicine at Trinity College, Dublin, in 1883, and became interested in the new science of bacteriology. For several years he worked in the laboratories of the Royal Colleges in Dublin and in 1887 became demonstrator in pathology at Cambridge, which post he left to go to Sydney. On his return to England he took

the post of professor of pathology at the Army Medical School at Netley in 1892. It was here that he worked on anti-typhoid vaccination, his first injections being given in 1896, though Pfeiffer had apparently given some previously. Wright's work in this field and his advocacy of immunization against typhoid fever against much opposition, for example, in the South African War, was probably his greatest contribution to medicine. In South Africa he was able to show a significant contrast in the incidence of the disease as between inoculated and uninoculated. The great fruits of this work were not to be gathered till the Great War of 1914-1918.

In 1902 Wright went to the Pathological Institute at Saint Mary's Hospital and was connected with this hospital for the rest of his life. He published many papers and several books, amongst which the "Technique of the Teat and the Capillary Glass Tube" was a useful laboratory text. His work on opsonin and the controversies about this and other subjects are now largely forgotten. He received many honours in his own country and from foreign countries. It must have been a matter of pride to him that Fleming made his observations on the properties of *Penicillium notatum* in Saint Mary's laboratories. This discovery was to save almost as many lives perhaps from sepsis in the second World War as Wright's work had saved from the enteric diseases in the first (and second) World War.

Doubtless it was from his post in the Army Medical School that Wright visualized the importance of prevention of infective diseases in great armies in the field. His name will always be remembered for this.

As a benefactor to mankind he is in the direct line from Pasteur and Lister, and after him comes Fleming, from the same school. It should be an encouragement to young graduates that without the great gifts of heart and mind that distinguished Pasteur and Lister, Almroth Wright by the strength of his convictions and the energy of his advocacy was able to win a place amongst the immortals.

HAROLD ALGAR SWEETAPPLE.

WE regret to announce the death of Dr. Harold Algar Sweetapple, which occurred on August 2, 1947, at Sydney.

WILFRED ROYLE DIVE.

WE regret to announce the death of Dr. Wilfred Royle Dive, which occurred on August 6, 1947, at Brisbane.

GRAHAM PATRICK DIXON.

WE regret to announce the death of Dr. Graham Patrick Dixon, which occurred on August 7, 1947, at Brisbane.

SIDNEY FANCOURT McDONALD.

WE regret to announce the death of Dr. Sidney Fancourt McDonald, which occurred on August 8, 1947, at Brisbane.

Nominations and Elections.

THE undermentioned has applied for election as a member of the New South Wales Branch of the British Medical Association:

Waddy, John Archibald, M.B., 1942 (Univ. Sydney), Main Street, Cessnock.

Notice.

A DERMATOLOGICAL DEMONSTRATION will be on view in the Department of Medicine, Room 317, Second Floor, New Medical School, Sydney, from August 6 to September 5, 1947.

Books Received.

"The Clinical Examination of the Nervous System", by G. H. Monrad-Krohn, M.D., F.R.C.P.; Eighth Edition; 1947. London: H. K. Lewis and Company, Limited. 7¼" x 5", pp. 400, with many illustrations. Price: 16s.

"The Louse: An Account of the Lice which Infest Man, their Medical Importance and Control", by Patrick A. Buxton, C.M.G., F.R.S.; Second Edition; 1947. London: Edward Arnold and Company. 8½" x 5½", pp. 172, with illustrations. Price: 10s. 6d.

"Mongolism and Cretinism: A Study of the Clinical Manifestations and the General Pathology of Pituitary and Thyroid Deficiency", by Clemens E. Benda, M.D.; 1947. London: William Heinemann (Medical Books), Limited. 9" x 6", pp. 326, with many illustrations. Price: 25s.

Diary for the Month.

AUG. 18.—Victorian Branch, B.M.A.: Finance Committee.
AUG. 19.—New South Wales Branch, B.M.A.: Medical Politics Committee.
AUG. 20.—Western Australian Branch, B.M.A.: General Meeting.
AUG. 21.—Victorian Branch, B.M.A.: Executive Meeting.
AUG. 21.—New South Wales Branch, B.M.A.: Clinical Meeting.
AUG. 22.—Queensland Branch, B.M.A.: Council Meeting.
AUG. 26.—New South Wales Branch, B.M.A.: Ethics Committee.
AUG. 27.—Victorian Branch, B.M.A.: Council Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute; Brisbane City Council (Medical Officer of Health). Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

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